Fiscal Year 1999

Annual Performance Evaluation and Appraisal

Lawrence Berkeley National Laboratory

Prepared by:

U.S. Department of Energy
Oakland Operations Office
December 1999

CONTRACTING OFFICER'S EVALUATION

The DOE Oakland Operations Office Performance Review Board reviewed and discussed the recommendations of functional managers and staff concerning the appropriate adjectival and numeric ratings with which to rate the University of California's performance in the management and operation of the Lawrence Berkeley National Laboratory. Based upon this process and a unanimous vote of the members of this board, an adjectival rating of "**outstanding**" is granted, based on a numeric rating of 90.9 points. This report, the "Fiscal Year 1999 Annual Performance Evaluation and Appraisal - Lawrence Berkeley National Laboratory" provides the basis for my determination, and is hereby endorsed and approved.

Recommendation:

/s/ Date: 1/21/00

Martin J. Domagala
Deputy Manager
Chairperson, Performance Review Board

Approval:

/s/ Date: 1/21/00

James M. Turner, Ph.D.
Manager
Oakland Operations Office

FY 1999 Annual Performance Evaluation and Appraisal for Lawrence Berkeley National Laboratory

TABLE OF CONTENTS

Executive Summary

Executive Summary

Introduction

This report, produced by the U. S. Department of Energy (DOE) Oakland Operations Office (DOE OAK), provides the Contracting Officer's written assessment of the Contractor's performance at the Lawrence Berkeley National Laboratory (LBNL) under contract DE-AC03-76SF00098. Contract Appendix F defines the Objective Standards of Performance agreed to by DOE and the University of California (Contractor or UC) to annually measure the Contractor's overall performance of administration and operations, and science and technology/programmatic performance under the contract.

Performance Period

This appraisal and evaluation is for the period from October 1, 1998 through September 30, 1999 (Fiscal Year 1999). Certain performance measures are on a calendar year basis and they are identified in the "Detailed Appraisal Results" section of the report.

Appendix F - Objective Standards of Performance and Contract Requirements

This report provides the Contracting Officer's Fiscal Year 1999 evaluation and validation of the Contractor's self-assessment of performance in its management and operation of LBNL for DOE under the contract. In this contract, UC and DOE have agreed to use a performance-based management system for Laboratory oversight. The parties agreed to use clear and reasonable, objective performance measures as standards against which the Contractor's overall performance of Science and Technology and Operations and Administration under the contract will be assessed and evaluated. DOE and UC also agreed that the Contractor would conduct an ongoing self-assessment process, including self-assessments done by the Laboratory, as the principal means by which the Contractor would evaluate compliance with the performance objectives contained in Appendix F.

DOE OAK conducts validations against the Contractor's self-assessment and evaluates the Contractor's performance. The validation effort is conducted by teams that are responsible for the various functional areas represented in Appendix F. These teams, with guidance from DOE OAK management, are responsible for developing an adequate, independent basis for assessing the quality, credibility, and accuracy of the Contractor's self-assessment; and to establish a basis for DOE OAK's evaluation of the Contractor's performance.

This report fulfills the requirements of the contract (Appendix F), and specifically supports and meets the following contract requirements:

- Provide a summary of the results from the conduct of the DOE OAK validation program and evaluation of performance of work under this contract, as required by Clause 2.6.

- Provide a written assessment of the Contractor's performance under the contract based upon the DOE OAK appraisal program and the Contracting Officer's evaluation of the Contractor's self-assessment, as required by Clause 2.6(e).

- Provide the basis for determination of the Contractor's Program Performance fee, as required by Clause 5.3.

- Provide the basis for determination of the Senior Management Salary Increase Authorization (SIA) Multiplier, as required by section III, (compensation) paragraphs (f), (6) and (8) of Appendix A and Section C, Part III of Appendix F.

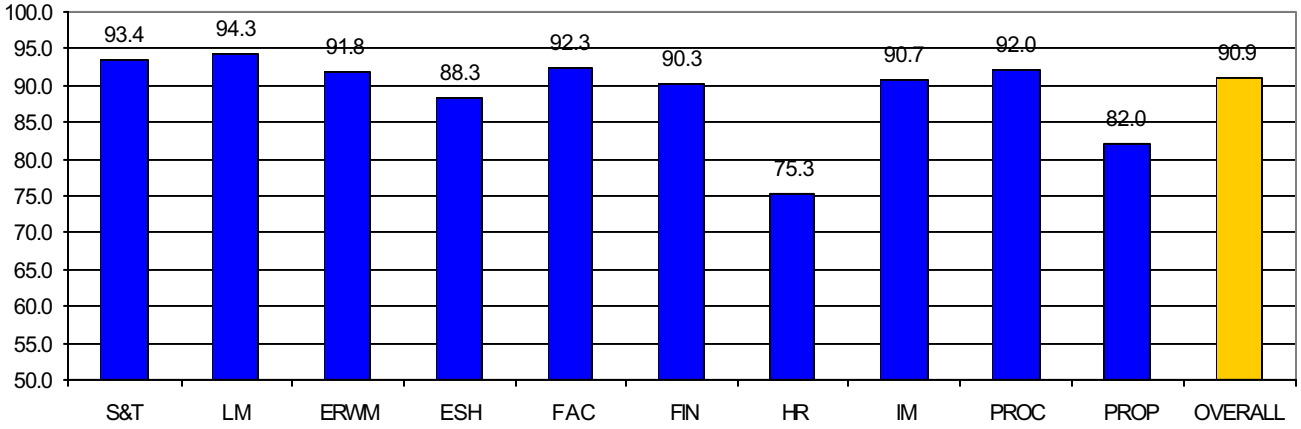
FY 1999 Appraisal Results in Brief

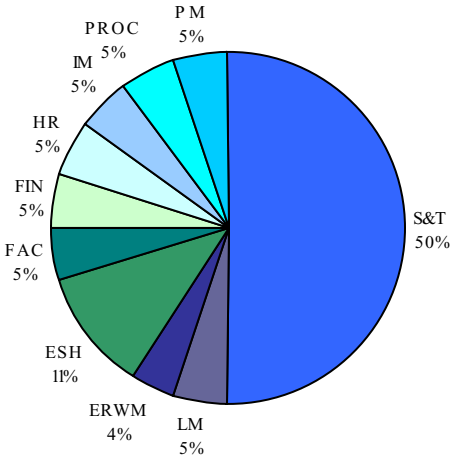
FY 1999 Appraisal Results in Brief

A. Overall Results FY 1999

DOE rates the overall performance of LBNL as **outstanding** for FY 1999.

A.1 RATING SUMMARY

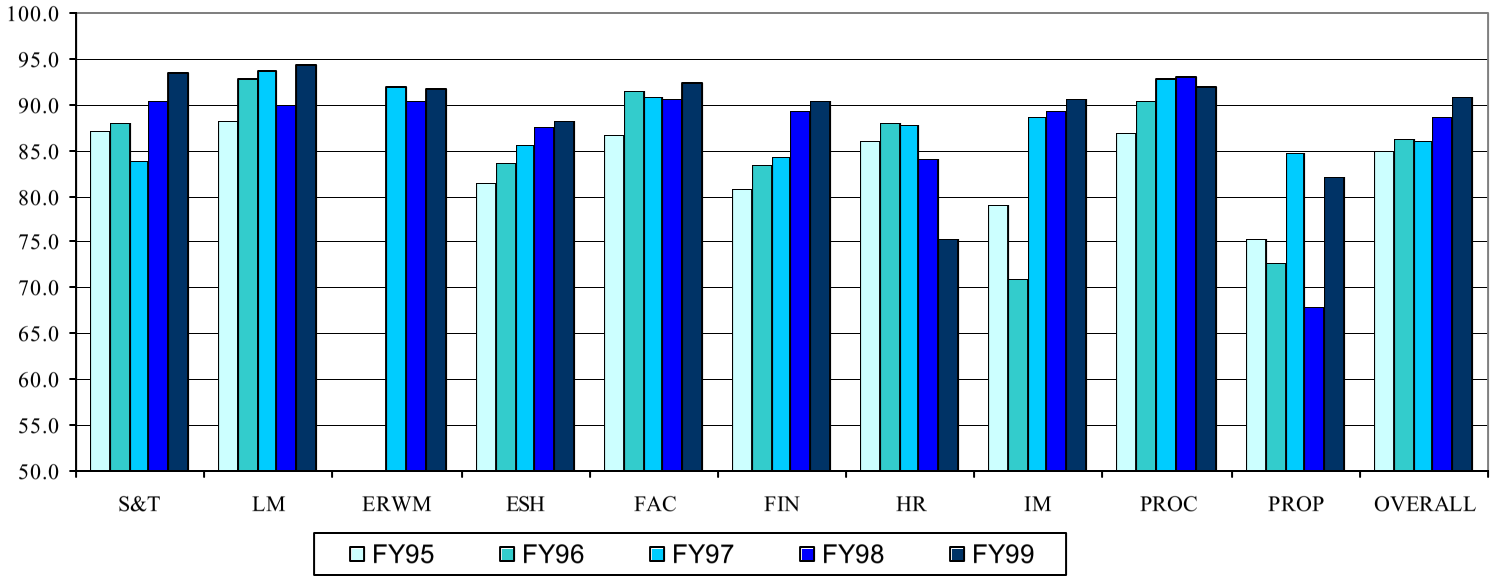




A.2 WEIGHTING SUMMARY

FY 1995-1999 Appraisal Results in Brief

B. Overall Trend Results FY 1995 – 1999



Science and Technology

DOE's science and technology/program assessment of the Contractor is based upon peer reviews of its scientific divisions, corresponding self-assessments by LBNL and the University of California, and validation reviews by DOE HQ program managers and their DOE OAK counterparts. The DOE assessment of performance for research programs is comprised of a funding weighted evaluation of the following DOE programs: Basic Energy Sciences (BES), High Energy Physics (HEP), Nuclear Physics (NP), Advanced Scientific Computing Research (ASCR), Fusion Energy Sciences (FES), Biological and Environmental Research (BER), Energy Efficiency and Renewable Energy (EERE), Fossil Energy (FE), and Civilian Radioactive Waste Management (CRWM; i.e., the Yucca Mountain Project). Within LBNL, each of these DOE programs is largely executed by one or two of the Laboratory's twelve scientific divisions. An exception to this is the BES program, which is carried out by four Laboratory divisions, including the ALS.

LBNL had a very successful and scientifically productive year in FY 1999. It's overall Science and Technology score of 93.4 reflects the fact that all but one Office of Science program provided across-the-board ratings of "outstanding" to LBNL research programs.

The overall rating of Science & Technology programs is **outstanding** for FY 1999.

Institutional Level Assessment

LBNL continues to excel in its ability to plan, develop and execute scientific programs. LBNL's Vision 2010 is comprised of five broad thrust areas that are well-aligned and integrated with the DOE Office of Science's new Strategic Plan, and that build upon its core competencies and emerging new research opportunities:

- Fundamental Understanding of the Universe
- Quantitative Biology
- Complex Systems (Nanoscience)
- New Energy Sources and Environmental Solutions
- Integrated High-Performance Computing.

The Laboratory has current program activities and proposed new initiatives in each of these areas. Work For Others (WFO) has been growing at LBNL, especially in the Life Sciences. It comprised ~19% of total laboratory funding in FY 1999, and is likely to continue growing with the start of a major new health-related basic research initiative on the UC Berkeley campus.

LBNL operates five user centers open to qualified researchers in the U.S. and from around the world:

- Advanced Light Source (ALS)
- National Energy Research Supercomputer Center (NERSC)
- National Center for Electron Microscopy (NCEM)
- 88" Cyclotron

- National Tritium Labeling Facility (NTLF).

All of these user facilities are operating at or near record levels of scientific productivity. The NTLF is operated for the NIH with WFO funding.

During FY 1999, LBNL was successful in preserving its open environment by being identified as a "Tier III" DOE site for security purposes, i.e., a fully open institution with no classified work or information on-site. This is critical to the cost-effective execution of the Laboratory's research missions given its close ties with UC Berkeley and other universities, and given that a significant fraction of its research staff are foreign nationals. The prospect of further security-related requirements still looms and will require continued, high-level vigilance by the Laboratory's management.

LBNL is more extensively involved than ever in major collaborations at research facilities being constructed and operated across the DOE complex and around the world. The new Congressionally mandated reductions in Contractor travel in FY 2000 present LBNL with significant challenges, both to meet their program/project expectations and commitments in these external collaborations, and to remain closely engaged within the scientific community and with DOE sponsors for ongoing programs conducted at the Laboratory.

Basic Energy Sciences

LBNL plays a major role in Basic Energy Sciences (BES) supported research. In March 1999, the LBNL Director co-chaired the first major BES workshop on Complex Systems, which was hosted at the Laboratory. LBNL's superb operation of two BES supported user facilities – the Advanced Light Source (ALS) and the National Center for Electron Microscopy (NCEM) – continue to maintain their vital services to the user community. LBNL also made important technical and management contributions to the Spallation Neutron Source (SNS) project, from developing a new state-of-the-art ion source to providing expertise for two crucial project reviews. A specific Laboratory accomplishment during FY 1999 was the first synthesis and bulk production of Carbon-36, a new fullerene species. LBNL's management of the BES programs has been timely, responsive, and forward looking as evidenced by the overall performance rating of **outstanding.**

Computing Sciences

LBNL's work in Computing Sciences and network research continues to be **outstanding**; it is one of the most productive and highest quality such groups in the world. LBNL's Applied Mathematics Research Program is one of the premier applied and computational mathematics research efforts in the country. Its broad and deep expertise continues to contribute to basic research in applied and computational mathematics and to applied problems in fluid dynamics, materials science, combustion, and genomics. The National Energy Research Scientific Computing Center (NERSC) is now the largest unclassified high performance computing resource in the world. With the successful commissioning of NERSC III in FY 1999, LBNL has entered the era of tera-flop computing. One of

its researchers shared a Gordon Bell prize in FY 1999 for demonstration of the highest ever performance on a parallel application code. The Energy and Sciences Network (ESnet), which connects NERSC to its more than 2000 users and provides a major piece of the internet backbone in the United States, continues to be a leader in networking design and innovation.

Nuclear Physics

LBNL continues to play a leadership role in the highest priority research areas in Nuclear Physics. The Laboratory achieved several notable accomplishments during FY 1999, including: the discovery of two new heavy elements, Z-118 and Z-116, at the 88" Cyclotron, and the on-time on-schedule delivery of major detector systems for the Relativistic Heavy Ion Collider (RHIC) project at Brookhaven National Laboratory and the Sudbury Neutrino Observatory (SNO) in Ontario, Canada. LBNL also has an initiative developing a major new radioactive beam facility. The Laboratory's performance in the Nuclear Physics program is considered **outstanding** in FY 1999.

High Energy Physics

One of the Laboratory's most notable achievements in FY 1999 was Science magazines citation of LBNL's Supernova Cosmology project as the "Breakthrough of the Year." The discovery, based on astronomical observations of a certain class of supernova events, that the universe is *accelerating* in its expansion indicates the prospect for a cosmological constant created by a yet unknown anti-gravitational force. In follow-up, LBNL is proposing a satellite to detect a large number of such supernova events to further study this "dark energy." LBNL also makes significant advanced detector contributions to HEP facilities at other sites. In FY 1999 these included the on-time, on-schedule delivery of the BaBar detector for the B factory at SLAC, and major components for the Collider Detector Facility (CDF) at Fermilab. It is also developing the ATLAS detector for the Large Hadron Collider in Europe. LBNL has begun an innovative research program in advanced, high-gradient laser acceleration of particle beams. There are some concerns about the loss of key program staff to retirements and matrix reassignment, and the potential for certain Bevatron facility planning options to impact the recently completed Superconducting Magnet test facility in the out-years. The Laboratory's overall rating in the program is **excellent**.

Fusion Energy Sciences

LBNL has done an **outstanding** job as the lead for the Office of Fusion Energy Sciences' Inertial Fusion Energy (IFE) program. LBNL showed leadership in deepening its collaboration with the Lawrence Livermore National Laboratory (LLNL) by forming a Virtual National Laboratory (VNL) for Heavy Ion Fusion (HIF) in which both LBNL and LLNL HIF researchers work together co-located at LBNL. They have demonstrated vision in carrying out long range planning and strong

support for the IFE program. With future fusion energy budgets uncertain, LBNL leadership must ensure that near-term tasks are clearly identified in field work proposals so than an orderly progression of accomplishments can be demonstrated.

Biomedical and Environmental Research

Life Sciences research at LBNL is growing rapidly, both in sponsorship from DOE and WFO (mostly from the National Institute of Health). The LBNL-supported Joint Genome Institute's Production Sequencing Facility (JGI-PSF) exceeded its FY 1999 DNA sequencing goals in the Human Genome Project, and is now the second largest genome sequencing facility in the U.S. (third in the world). It is on-schedule to deliver its part of the "95% complete" draft human genome sequence by the Spring of 2000. LBNL is also beginning to build a post-genomic research program, including the construction of structural biology beamlines at the ALS, work on molecular machines, and computational biology.

LBNL's Earth Sciences Division also performs basic environmental research for the BER program in the important and emerging fields of Carbon Sequestration and Bioremediation. In FY 1999, LBNL contributed to DOE R&D planning and roadmapping efforts in both of these areas. The Berkeley Laboratory was also selected by the Office of Science to co-lead, with LLNL, a new DOE Center for Research on Ocean Carbon Sequestration (DOCS). LBNL developed and maintains a valuable public web-site for the Natural and Accelerated Bioremediation Research (NABIR) program. The Laboratory's overall performance on BER programs is **outstanding**.

Energy Efficiency and Renewable Energy

LBNL provided outstanding leadership, management, contracting skills, technical expertise, and coordination of the research community and electric industry to launch a highly productive national partnership to support the Department's critical mission of assuring reliability of the Nation's electricity infrastructure during this turbulent time of industry restructuring. LBNL has also done an outstanding job in conducting, coordinating, and managing the research and development of advanced batteries in support of the DOE goals. The Laboratory provides excellent U.S. leadership on the policy task force of the U.S.-China Working Group on energy efficiency. In the Building Technologies program, LBNL's efforts to make the appliance standards analyses simultaneously more transparent and robust have greatly facilitated stakeholder understanding and acceptance of the Department's appliance standards program. In the Lighting program, LBNL continues to be highly successful in applied R&D projects (lighting controls, improved lumenaires), and is attempting to rebuild a program in basic lighting science and technology. While management of the program has progressed, there remain opportunities for improvement: further development of staff capabilities, project planning, design and reporting, and synergism with other lighting research programs and facilities. In the Windows program, LBNL developed THERM 2.0 code was adopted by the National Fenestration Rating Council (NFRC), and LBNL provided training support to industry. The overall rating of LBNL's FY 1999 work for the Office of Energy Efficiency and Renewable Energy is **excellent**.

Civilian Radioactive Waste Management

LBNL conducted **outstanding** geoscience and geological engineering research important to the objectives of the Yucca Mountain Project (YMP) for the safe, long-term underground storage of high-level nuclear wastes. While further improvements can be made in the area of quality assurance, LBNL has often been viewed as a leader over the other national laboratories because of its performance, quality of science, and leadership in getting hard tasks accomplished well.

Fossil Energy

LBNL's research associated with the State of California requirement to monitor vapor emissions from industrial heavy oil tanks has resulted in millions of dollars of cost saving for industry and ultimately end-users. The Laboratory's data collection efforts have also aided regulators in setting science-based limits on hydrocarbon contamination clean-up. LBNL's overall performance is rated as **excellent**.

Operations and Administration

LBNL continued to make overall performance improvements in the Operations and Administration (O&A) functional areas. In FY 1999, six of these areas received an overall adjectival rating of outstanding, two were rated excellent, and one area was good, for an overall O&A score of 88.4 percent. The Laboratory's continued investments in and application of information technology have been a key enabler of performance progress in all the Administrative areas.

The overall rating for Operations and Administration was **excellent** for FY 1999.

Laboratory Management

LBNL's overall Laboratory Management rating for FY 1999 is **outstanding** at 94.3 percent. LBNL's planning activities continue to be recognized as "best-in-class" among DOE Office of Science (SC) laboratories. During FY 1999, LBNL leaders also made substantial contributions to the SC Strategic Plan and Science Portfolio. Among the important results are the continued growth in productivity of the Advanced Light Source (ALS) and Joint Genome Institute (JGI). The Berkeley Laboratory has strongly supported the DOE "integrated system of laboratories" by contributing its expertise in accelerators, detectors, and other areas through collaborations on a number of major facilities and projects around the DOE complex. The Laboratory is also responding appropriately to a number of new DOE and Congressional requirements related to security, project management, travel costs, and others. Laboratory management's attention to Property Management issues raised in last year's appraisal, including the communication of expectations for individual property accountability, led to a substantial improvement in performance in FY 1999.

LBNL continued to successfully reduce its institutional indirect burden rates in FY 1999, even as it also continued to make targeted infrastructure investments out of overhead funding. The ratio of research to support staff leveled-off at 2.3. The recent spate of new DOE and Congressionally mandated requirements on the Laboratory will challenge its ability to continue this trend. LBNL has also been successful in the recruitment of qualified scientists and engineers for growing, high-demand areas in the life and information/computing sciences. The Laboratory continues to make outstanding use of facilities planning documents and increasing use of management information systems to steward its aging physical assets and prioritize site investments.

LBNL's leadership remains committed to building credibility and trust with stakeholders and the public. Proactive efforts continued regarding the operation of the National Tritium Labeling Facility (NTLF), and the Laboratory is now establishing an Environmental Sampling Project Task Force that will be open to public review and comment. In FY 1999, LBNL contracted for a survey of the local community and used the results to draft a Community Relations Plan. Laboratory management responded promptly and appropriately in the case of alleged scientific misconduct. It entered an agreement with the City of Berkeley to provide "first responder" fire protection and emergency services for areas most proximate to its site. The Laboratory also expanded its tour program and continues to develop and expand the information available on its website.

Berkeley Laboratory management continues to demonstrate a commitment to continuous quality improvement, and to a culture of follow-through and meeting commitments. LBNL continues to employ the Laboratory Corrective Action Tracking System (LCATS) and systems within the Internal Audit Services Department to track commitments, assure follow-up, and enforce accountability resulting from ES&H and audit findings. Project management was a growing DOE concern in FY 1999, and LBNL appointed a Deputy for General Science Projects to better oversee and manage both internal and external projects. The Laboratory was successful in fully meeting its collaboration commitments on-time and on-schedule for the B factory at SLAC, and the RHIC facility at BNL. LBNL also met all of its commitments with respect to Y2K preparations, and for the implementation of new security-related requirements. The Laboratory's commitment to Integrated Safety Management (ISM) resulted in DOE/OAK providing it a Phase II (Effectiveness) validation in FY 1999.

Environment Restoration/Waste Management

LBNL achieved an **outstanding** rating with a numeric score of 91.8 percent. LBNL's Waste Management (WM) Program performed exceptionally well in executing the approved technical scope of their FY 1999 baseline within the approved budget. WM also continued streamlining efforts to maximize the use of Environmental Management (EM) funds for the safe and proper disposal of waste. The program worked within the DOE-EM WM Baseline Change Proposal process and returned saved funding to support other DOE OAK priorities. The Laboratory successfully shipped mixed waste to Idaho National Engineering Laboratory and met Federal Facility Compliance Act Site Treatment Plan milestones. The Laboratory also maintained its aggressive low level radioactive waste shipment schedule this year.

In FY 1999, the LBNL Environmental Restoration (ER) Program continued to demonstrate a high level of commitment to cost savings and to project/program performance. The ER Program had a positive Cost Variance of nine percent and a Schedule Variance of minus one percent, for a favorable net variance.

Environment, Safety and Health

LBNL's overall FY 1999 performance in Environment, Safety and Health (ES&H) is rated as **excellent**, at 88.3 percent. In FY 1998, the DOE Integrated Safety Management (ISM) validation review of LBNL indicated that a strong foundation for Integrated Safety Management was demonstrated, but it also identified several opportunities for improvement. During FY 1999, the Laboratory built on that foundation, and made improvements in the areas of line management commitment to ISM implementation, identification of hazards and requirements, and training. In June 1999, DOE-OAK provided a Phase II (Effectiveness) validation of LBNL's ISM program.

Within the ES&H area, LBNL has four ISM process measures and nine outcome measures. For the Process measures, the evaluation resulted in three outstanding ratings and one excellent rating. For the Outcome measures, four were rated outstanding (worker radiation exposure; unplanned radiation exposure; chemical exposure; waste reduction and recycling), two were rated excellent (public radiation protection; tracking environmental incidents), two were rated good (control of radioactive material; occupational safety and health), and one was rated marginal (accident prevention). Accident Prevention was rated marginal since a downtrend in the statistics for lost workdays and total reportable cases was not achieved.

Facilities Management

LBNL's overall Facilities Management rating is **outstanding** at 92.3 percent. The Laboratory achieved all 14 of its planned goals in the area of Real Property Management. The accomplishments include completion of Wet Laboratory space utilization studies, establishment of space utilization standards, development of a substandard/excess space plan and consolidation of off-site leased space. In Physical Asset Planning, the Laboratory selected a site for the Laboratory's new Computing Center in Oakland, successfully executed its work plan for Comprehensive Integrated Planning, and updated the Life Cycle Asset Management (LCAM) Partnering Agreement with DOE OAK.

In Facilities Maintenance Management, a comparison of LBNL to the Energy Facility Contractors Group (EFCOG) benchmarking participants, including DOE sites and private industry, shows LBNL to be "best-in-class" for many of the selected maintenance performance indicators. Noteworthy accomplishments among the planned goals achieved in FY 1999 are: improvement in the quality of procedures and management of maintenance requirements, and a pilot property outsource inspection program. In FY 1999, LBNL had a perfect record (100 percent) for electric service reliability; there were no unplanned electrical outages during the year. The Laboratory also met all of its energy management goals and continued to reduce its energy use per square foot; it is now down 33.8 percent from the FY 1985 baseline. In Project Management, LBNL met all 23 of its construction project milestones while keeping the cost of active line items slightly under budget.

Financial Management

LBNL's overall Financial Management rating is **outstanding** at 90.3 percent. The Laboratory was rated outstanding in two of the four primary objectives and excellent in the remaining two. Individual measures scored higher in all areas over FY 1998 except one that resulted from a cost control problem. Apart from this single area, the Laboratory continues to increase its effectiveness and performance in the financial management area. Financial system upgrades are improving quality and cost efficiency with reduced cycle time. Information technology investments are offsetting staff reductions. This year, for the first time, some performance elements were rated using pre-defined gauge model criteria.

Human Resources

LBNL's performance in FY1999 supports a rating of **good**, at 75.3 percent. It reflects a decline from the FY 1998 rating of excellent, at 84.1 percent, and continues a downward trend that LBNL's Human Resources (HR) function has experienced since FY 1996. The lower rating in FY 1999 is the result of marginal ratings in two out of ten of the performance measures. The first is due to a lack of progress in benchmarking its research and support Full-Time Equivalent (FTE) costs to similar organizations. The Laboratory made modest attempts at two different methods to achieve this comparison, but one method was abandoned and the other failed to provide adequate data. The second area of shortcoming was under the Equal Opportunity objective, in which the Laboratory failed to meet deadlines for identifying "High Priority Job Groups" for targeted recruitment efforts, and for submission of its Recruitment Outreach Plan for these job groups. FY 1999 was the third year in which problems have existed in meeting the intent and deliverables of this measure.

LBNL's HR successes for FY 1999 occurred primarily under the Cost-Effectiveness objective. The Laboratory's HR Department expended significant effort to identify and improve the efficiency of its processes. These improvements included: the utilization of a PeopleSoft resume database to enable divisions to conduct skill-based searches for needed expertise, redesign of the Guest and Contract Labor processes, forms and procedures to improve the tracking and processing of its fluid work force, and the development of a desk manual and tracking system to improve the accuracy of H1B visa data and the efficiency of visa processing. In addition, LBNL has continued to reduce its overall supplemental labor work force through implementation of a new utilization policy that targeted the use of individuals long-term. Finally, through its experience in the approval process for the Compensation Increase Plan, LBNL has reviewed its method of measuring the market, begun examining eight alternative surveys, and developed a plan to review the accuracy of its market comparisons for each structure.

These achievements were largely the result of efforts in response to drivers outside the contract, but are also relevant to Appendix F performance measures. A broader concern in the HR area is that the contract performance measures do not appear to be incentivizing or driving performance improvement.

Information Management

The Laboratory earned an **outstanding** rating for FY1999, with an overall score of 90.7 percent. It demonstrated that information is managed as a corporate asset and that Information Management (IM) activities directly contribute to the Laboratory's mission. New IM systems and processes have resulted in higher levels of productivity, improved customer feedback and satisfaction, and cost savings enabled by reduced staffing requirements. The elimination of legacy systems also provides better capabilities to Laboratory customers. Several IM organizations have received external recognition for

their efforts and have provided their lessons learned experience to other Laboratories, universities and corporations.

The Laboratory's IM Planning is extensive and includes substantial user involvement. LBNL has received external recognition of its IM planning over the last several years for its state of the art information systems and support. LBNL was early in its planning and preparations for Year 2000 (Y2K) compliance, and used the opportunity to analyze its Information Systems. The Laboratory hosted two DOE Y2K reviews and has met its Y2K readiness requirements.

Procurement

LBNL achieved an overall performance rating of **outstanding** at 92.0 percent. The Procurement operations received outstanding in all four performance objectives. Procurement continues to balance assessing system operations, cost efficiency and effectiveness, customer satisfaction, and employee learning and growth.

The Procurement Manager is a recognized leader in the Office of Science Laboratory procurement community. Procurement has a credible, self-critical, and well documented system evaluation program that has been shared with other DOE entities. Procurement has developed a plan to maintain the necessary information for procurement employees to perform their functions. Benchmarking with other DOE Laboratories in cycle time, alternate procurement approaches, and cost to spend ratio have resulted in cost and time savings for the Laboratory and DOE. Procurement made excellent progress to improve overall customer satisfaction with requestors and procurement employees. Supplier management for goods and services continues to increase toward closing the gap toward its objective of 90 percent or better for on-time deliveries. Socioeconomic outreach and achievements continue to demonstrate a commitment to the small business program.

Property Management

During FY 1999, LBNL significantly improved the performance of its Property Management program, and earned an overall rating of **excellent** at 82.0 percent. Particularly noteworthy were the contributions of the newly appointed Site Services Manager in obtaining laboratory management support for the program. The FY 1999 statistical sample inventory, which resulted in an outstanding score, benefited from improved planning and institutional support. Successful implementation of the Sunflower Assets database system resulted in much improved data accuracy and increased confidence among the Lab's property management customers. Significant improvements were also realized in the critical areas of personal property stewardship and custodial assignment accuracy. Continued effective performance in motor vehicle utilization management during the performance period was also a contributing factor in the overall performance.

Opportunities for improvement were identified in the areas of tagging property in the field, addressing property issues on expired personal property loans, and processing excess property at the warehouse.

Based on an agreement between DOE-OAK, UCLAO and LBNL prior to FY 1999, LBNL was not scored in two performance areas for FY 1999: Balancing Cost and Performance, and Employee Learning and Growth. Points from these elements were redistributed to the areas of Inventory and Stewardship in order to allow the Laboratory to focus resources there. Based on LBNL's strong FY 1999 performance, the Laboratory appears to be in a position to fully address and again be rated in these areas starting in FY 2000.

Conclusions and Recommendations

LBNL has demonstrated an **outstanding** level of overall performance in FY 1999 in almost all areas. Most Science and Technology programs are performing at the outstanding level, with a few at the excellent level. Most operating and administrative areas are also operating at the outstanding level, with two in the high excellent range, and one (Human Resources) rated good overall. The latter was due largely to shortfalls in two of the ten measures in the HR area. Discussions are underway between DOE OAK and the Laboratory to ensure that the performance measures for FY 2000 and beyond are a value-added component of the HR Department's responsibilities, that they accurately measure progress in meeting the Laboratory's HR priorities and objectives while fostering continuous improvement.

Science & Technology

Science and Technology/Programmatic Performance

The Institutional-level Assessment for the Lawrence Berkeley National Laboratory (LBNL) highlights major program challenges and issues faced by the Laboratory during the last year, as well as prospects and plans for the future. LBNL continues to excel in its ability to plan, develop and execute scientific programs. The Laboratory's institutional planning process is aimed at establishing research directions and priorities, and ensuring the future viability of vitality of the institution. The Director's statement in the Laboratory's FY 2000 – FY 2004 Institutional Plan and the Director's 'State of the Laboratory' address provided in June 1999 highlight significant research progress during the past year, where Laboratory Management's attention has been directed, and outline strategic directions and initiatives for the future. LBNL's Vision 2010 is comprised of five broad thrust areas that build upon its core competencies and emerging new research opportunities:

- Fundamental Understanding of the Universe
- Quantitative Biology
- Complex Systems (Nanoscience)
- New Energy Sources and Environmental Solutions
- Integrated High-Performance Computing.

The Laboratory has a number of current program activities and proposed new initiatives under each of these areas. They are well-aligned and integrated with the DOE Office of Science's new Strategic Plan.

LBNL's management of the Laboratory-Directed Research and Development (LDRD) and Work for Others (WFO) programs continue to direct the Laboratory's resources toward new scientific opportunities and to keep the Laboratory at the forefront of science and technology with its mission profile. For the past several years, the Laboratory has funded the LDRD program at about 3.5 percent of the total funding. WFO has been growing at LBNL in recent years, especially in the Life Sciences. In FY 1999, WFO funding totaled ~$73M at LBNL, comprising ~19 percent of the total funding coming into the Laboratory. The prospect is for continued growth in WFO, especially with the start of a major new health-related basic research initiative on the UC Berkeley campus.

LBNL operates five user centers open to qualified researchers in the U.S. and from around the world:

- Advanced Light Source (ALS)
- National Energy Research Supercomputer Center (NERSC)
- National Center for Electron Microscopy (NCEM)
- 88" Cyclotron
- National Tritium Labeling Facility (NTLF).

All of these user facilities are operating at or near record levels of scientific productivity. The NTLF is operated for NIH on WFO funding.

During FY 1999, a number of new operational and administrative requirements were promulgated on the Laboratory from Congress and DOE HQ that have at least the potential for very adverse impacts on its science and technology programs beginning in FY 2000. These include large reductions in travel funding (cut more than one-third from FY 1999 levels), pre-approval requirements for hosting certain conferences, various security-related limitations and requirements, and a potential mandate to relocate employees now in its Washington DC office. LBNL was successful in preserving its open environment by being identified as a "Tier III" DOE site for security purposes, i.e., a fully open institution with no classified work or information on-site. This is programmatically critical given the Laboratory's close ties with the UC Berkeley campus and other universities, and given that a significant fraction of its research staff are foreign nationals. The prospect of further security-related requirements still looms and will require continued, high-level vigilance by the Laboratory's

management. More than ever, LBNL is extensively involved in major collaborations at research facilities being constructed and operated across the DOE complex and around the world. While it is too early to assess the programmatic impacts of the new travel restrictions, the magnitude of the reductions will clearly reduce face-to-face meetings and communications between researchers, and could threaten the Laboratory's ability to deliver on expectations with its external collaborators.

DOE's science and technology/program assessment of the Laboratory is based upon individual peer reviews of its scientific divisions, corresponding self-assessments by LBNL and the University of California, and validation review by DOE HQ program managers and their DOE OAK counterparts. The DOE assessment of performance for research programs is comprised of a combined evaluation of the following DOE programs: Basic Energy Sciences (BES), High Energy Physics, Nuclear Physics, Advanced Scientific Computing, Fusion Energy Sciences, Biological and Environmental Research, Energy Efficiency and Renewable Energy, Fossil Energy, and Civilian Radioactive Waste Management (the Yucca Mountain Project). Within LBNL, each of these DOE programs is, for the most part, executed by one or two of the Laboratory's twelve scientific divisions. An exception to this is the BES program, which is carried out by four Laboratory divisions, including the ALS.

The overall rating of these programs is **outstanding** for FY 1999.

LBNL, UC and DOE evaluated the programs against the following four criteria:

Criteria 1: Quality of science

Reviewers will consider recognized indicators of excellence, including impact of scientific contributions, leadership in the scientific community, innovativeness, and sustained achievement. As appropriate, they may also evaluate other performance measures such as publications, citations and awards.

Criteria 2: Relevance to national needs and agency missions

Committees will consider the impact of Laboratory research and development on the mission needs of the Department of Energy and other agencies funding the programs. Such considerations include national security, energy policy, economic competitiveness, national environment goals, as well as the goals of DOE and other Laboratory funding agencies in advancing fundamental science and strengthening science education. Committees will assess the impact of Laboratory programs on industrial competitiveness and national technology needs. In this assessment, committees will assess characteristics that are not easily measured, including relevance of research programs to national technology needs and effectiveness of outreach to industry. As appropriate, they may consider such performance measures as licenses and patents, collaborative agreements with industry, and the value of commercial spin-offs.

Criteria 3: Performance in the technical development and operation of major research facilities

Performance measures include success in meeting scientific and technical objectives, technical performance specifications and user availability goals. Other considerations may include the quality of user science performed, extent of user participation and user satisfaction, operational reliability and efficiency, and effectiveness of planning for future improvements, recognizing that DOE programmatic needs are considered to be primary when balanced against user goals and satisfaction. This includes, but is not necessarily limited to, LBNL's performance related to aspects of the Spallation Neutron Source (SNS) Project, in accordance with the inter-Laboratory Memorandum of Agreement and approved work plans.

Criteria 4: Programmatic performance and planning

The assessment should focus on the achievement of broad programmatic goals, including meeting established technical milestones, carrying out work within budget and on schedule, satisfying the sponsors, providing cost-effective performance, and planning for the orderly completion or continuation of the programs, and appropriate publication and dissemination of scientific and technical information. In assessing the effectiveness of programmatic and strategic planning, the reviewers may consider the ability to execute projects in concert with overall mission objectives, programmatic responsiveness to changes in scope or technical perspective, and strategic responsiveness to new research missions and emerging national needs. In the evaluation of the effectiveness of programmatic management, consideration may include morale, quality of leadership, effectiveness in managing scientific resources (including effectiveness in mobilizing interdisciplinary teams), effectiveness of organization, and efficiency of facility operations.

Performance Area: Biomedical and Environmental Research

FY 99 Overall Performance Summary*:*

LBNL's research in the Biological and Life Sciences plays an important role in investigating the basic mechanisms of human disease. LBNL has established a preeminent position in four specific areas of human disease research: coronary artery disease; the biology of breast cancer; metabolic studies of neurological diseases; and disorders of red blood cell formation. These studies entail a spectrum of disciplines: high throughput genomic sequencing; molecular cytogenetics; cellular differentiation, growth, aging, and carcinogenesis; hematopoiesis; subcellular and macromolecular structure; radiation biology; diagnostic and functional imaging; and the development of bioinstrumentation.

Life Sciences research at the Berkeley Laboratory is expanding. Over 700 individuals work in the Life Sciences and Physical Biosciences Division, with an FY 1999 operating budget exceeding $72 million. Funding support is provided by DOE's Office of Biological & Environmental Research (OBER), the National Institutes of Health (NIH), NASA, the University of California, and other sources including industrial partners.

LBNL's Earth Sciences Division also performs basic environmental research for OBER in the important and emerging fields of Carbon Sequestration and Bioremediation. In FY 1999, LBNL contributed to DOE R&D planning and roadmapping efforts in both of these areas. The Berkeley Laboratory was also selected by the Office of Science to co-lead, with LLNL, a new DOE Center for Research on Ocean Carbon Sequestration (DOCS).

Overall Performance Rating: Outstanding

Criteria 1: Quality of science:
Rating: Outstanding

Life Sciences research at LBNL continues to be of the highest quality and to have significant scientific impact. Many investigators are world leaders in their respective fields. Laboratory Staff have received ~20 Major Awards in the last two years. LBNL has also published more than 180 peer-reviewed scientific papers dealing with OBER sponsored Life Sciences research over the past two years.

Within DOE's Human Genome Program (HGP) during FY 1999, sequencing efforts at the LBNL managed Joint Genome Institute-Production Sequencing Facility (JGI-PSF) in Walnut Creek California has produced 10 million subunits to DNA sequenced to "Bermuda Standards," the accepted international quality standard. Additionally, the PSF produced 55 million subunits of "high quality draft" and 70 million of phase I draft sequences. This greatly exceeding the goal of 30 million draft sequences. Due to changing goals in the International Human Genome Program during the spring of FY 1999, DOE's sequencing goals for FY 1999 and FY 2000 are now changed to simply produce as many draft sequences as possible.

During FY 1999, LBNL researchers successfully underwent a peer-review competition that resulted in the initiation of 5 new Low Dose projects. These are for studies in the following areas: responses to radiation, studying DNA damage and repair, investigating radiation versus endogenous damage, and work on risk modeling. In addition, four other investigators successfully underwent reviews to maintain their programs in Low Dose research and in Model Organisms research.

The LBNL program in Structural Biology has shown outstanding performance by developing a new type of x-ray spectroscopy for studying the oxidation state of atoms in biological molecules and other materials, establishing new National and International collaborations, and publishing a number of research articles in peer-reviewed journals. LBNL has also made significant progress in the areas of studying biological structures by neutron diffraction, Advanced Light Source Soft-X-ray microscopy, and electron and X-ray crystallographic methods.

The data management activities for NABIR (Natural and Accelerated Bioremediation Research) are shared with ANL. LBNL's part is the Meta-Data part (data about the data) of the jointly developed NADIMS software package. NADIMS is a successful hybrid of off-the-shelf and custom developed software.

LBNL, jointly with LLNL, successfully competed with other DOE Laboratory proposals in FY 1999 to win the selection as co-director of a new DOE Center for Research on Ocean Carbon Sequestration (DOCS). The LBNL and LLNL co-PI's have worked well to bring a strong group of university and research institutions together to work collaboratively with DOCS. DOCS has started the groundwork for an outstanding research program over the next three years.

Criteria 2: Relevance to national needs and agency missions
Rating: Outstanding

Life Sciences research at LBNL addresses DOE mission needs in the fields of genomics, understanding human gene functions, low dose radiation research, structural biology, and nuclear medicine. The program also receives much funding support from the National Institute of Health (NIH). All of these areas are highly relevant and growing in their importance, funding, and pay-off.

In the HGP, the actual level of DOE DNA sequencing produced in FY 1999 reflected an increase over the original goals in the Presidential Agreement, and is consistent with the International Human Genome Program's new objective of producing a high quality working draft of the complete human genome by Spring of 2000, several years ahead of the original schedule. This high quality working draft of the human genome will provide scientists and medical researchers with much of the information they need to begin unraveling the mysteries of life, and for developing new drugs and medical treatments.

LBNL is becoming more involved in two emerging areas of environmental research that offer high leverage in applying basic science to more cost-effectively address large-scale problems: carbon sequestration and bioremediation. While the Laboratory's research in these areas is comparatively in its infancy, these fields have outstanding relevance to the DOE mission, and to national and global needs.

Criteria 3: Performance in the technical development and operation of major research facilities
Rating: Outstanding

LBNL has done an outstanding job of working to ensure the continued success of the Joint Genome Institute and its Production Sequencing Facility, a facility whose success is key to the future of the Life Sciences research program. The Laboratory has also done an outstanding job of attracting a large number of new and future users for beamlines at the Advance Light Source (ALS). Additionally, there has been a significant improvement in the structural biology program and its' use of the ALS. For example, more than one-quarter of the ALS's 800 users conduct research using the new Macromolecular Crystallography Facility (MCF) beamline.

Criteria 4: Programmatic performance and planning
Rating: Outstanding

LBNL does an outstanding job of coordinating their research program, developing their research teams, and recruiting and retaining new staff members to support science and the mission needs of the Biological research program.

LBNL has also done an outstanding job of attracting a large number of new and future users to perform research at ALS beamlines. In FY 1999, over half of the ALS's 600 users were performing BER program-related research as follows:

Biological and Life Sciences:	184 (out of 600 users)
Soft x-ray microscopy:	24
Medical Applications:	9
Chemistry and Biochemistry:	65
Earth Sciences:	11
Environmental Sciences:	25
TOTAL:	318

In FY 1999, LBNL made outstanding contributions to DOE R&D planning and roadmapping efforts in Carbon Sequestration and Bioremediation. It's pursuit of growing involvement in these important and emerging fields is commendable. The Berkeley Laboratory was selected by the Office of Science to co-lead, with LLNL, a new DOE Center for Research on Ocean Carbon Sequestration (DOCS). Basic research into Carbon Sequestration, including the improved quantitative understanding of the Earth's natural carbon-cycle and its natural sources and sinks of carbon compounds, offers the long-term prospect of an important new means for mitigating the human influence on the global climate resulting from fossil-fuel combustion and net deforestation. Carbon sequestration (and fuels decarbonization) would complement the more traditional supply and demand-side approaches to reducing greenhouse gas emissions, i.e., developing new non-fossil energy sources (renewables and nuclear), and improved end-use energy efficiency.

Basic microbial research offers the prospect of using natural and bioengineered micro-organisms to remediate hazardous, toxic, and potentially even radioactive waste sites far more inexpensively, rapidly, and effectively than conventional approaches. The NABIR (Natural and Accelerated Bioremediation Research) Program Office is centered at LBNL. High standards and strong commitment are applied in providing program support for an extensive public website, logistics for an annual Principal Investigator meeting, advice on the acquisition of a NABIR Field Research Center, and other activities. One particularly impressive product is the NABIR Primer on bioremediation "Bioremediation of Metals and Radionuclides ... What It Is and How It Works."

Performance Area: Basic Energy Sciences

Overall Performance Rating: Outstanding

Criteria 1: Quality of science:
Rating: Outstanding

The major BES-supported research efforts at LBNL are in the areas of materials and chemical sciences. Smaller efforts are also performed in the areas of geosciences, engineering, and energy biosciences.

LBNL has performed outstanding research for the Materials Sciences Program in the Condensed Matter Physics and Materials Chemistry sub-program including laser spectroscopy, superconductivity, thin films, femtosecond processes, biopolymers, polymers and composites, surface science, and theory. For example, a new fullerene species, C36, has been synthesized and produced in bulk quantities for the first time. In the Center for Advanced Materials (CAM), high-quality research is conducted in the processing, mechanical fatigue, and high-temperature corrosion of structure ceramics and ceramic coatings; and also in the synthesis, structure and properties of advanced semiconductor and semiconductor-metal systems. In addition, high quality work is being carried out in polymers; surface science and catalysis; and structure, development and magnetic properties of high performance metals and alloys. Outstanding scientific achievements under the Metal and Ceramic Sciences sub-program at LBNL included the first imaging of a light atom (nitrogen) which was achieved by full reconstruction of the electron wave after it passed through a sample of gallium nitride in an electron microscope. Another achievement was the identification of a new fabrication route for gallium nitride semiconductors. An increased coherence and focus is now evident in the Ceramic Science program which is now emphasizing grain boundaries and interfaces with an emphasis on nonstructural and nanochemical details. An overall focus or direction has not emerged for the CAM high performance metals program, although some parts under it appear to be very promising. Several new materials sciences projects of great promise are underway which make use of the ALS at LBNL. Principal Investigators (PIs) at LBNL funded by BES have won major prizes and awards sponsored by professional societies and by others.

The Chemical Sciences Program at LBNL has long excelled in fundamental chemical dynamics research using molecular-beam techniques. The program is directed at very basic research issues underlying heavy element chemistry, catalysis, and combustion, all of which are priority science issues for DOE. LBNL is recognized for its outstanding research in radiochemistry, the chemistry of the actinides, inorganic chemistry, and both homogeneous and heterogeneous chemical catalysis. Historically, the staff has performed at a very high level. Many of the PIs supported through the program continue in that vein. Their impact and leadership may be measured through the high regard they are held by their peers – many of the PIs are members of the National Academy of Sciences. The chemical dynamics beamline at the ALS is relevant to the broad science objectives of the chemical physics program in the Chemical Sciences Division. Because of the impact the chemical sciences

programs at LBNL have on setting new directions for the field of chemistry throughout the world, a higher level of risk in these programs is encouraged.

The Geosciences Program supports high quality experimental and computational research on rock physics of porous and fractured rock, subsurface imaging through both seismologic and electromagnetic methods, and hydrologic research on fluid flow through both pores and fractures. LBNL is expanding a program in biogeochemistry using the ALS and other facilities. LBNL researchers in geomechanics, geochemistry and geophysics continue their outstanding research with significant contributions in these research areas in the peer-reviewed literature. They have been active participants in National Academy of Sciences committees, Earth Sciences councils and BES-investigator workshops. Recent research proposals in geomechanics, geophysics, geochemistry, and hydrology have received outstanding ratings from the community.

Criteria 2: Relevance to national needs and agency missions
Rating: Outstanding

The research conducted at the Materials Sciences Division is relevant to the long-term science mission of the DOE. Dedication to their internationally recognized research program has significantly contributed to the overall advancement of the BES program.

The research supported through the Chemical Sciences Division at LBNL continues to be quite relevant to programmatic interests. Fundamental studies of chemical dynamics including theory and experiment are quite valuable to unlocking the secrets of chemical reaction mechanisms of simple combustion reactions. Similarly, the study of photochemical reactions in zeolitic structures may open new avenues for the conversion of solar energy to other more useful forms of chemical energy. Atomic physics research continues to provide quite fundamental information on the interactions between ions, photons, and electrons.

LBNL research in Geosciences is recognized for its impact of the DOE technology programs, especially in Fossil Energy (Oil and Gas Program) and Environmental Management. Leadership in combining fundamental geochemical, geomechanical, and hydrologic investigations of fluid-flow processes in the shallow crust serves as an outstanding foundation for collaboration and integration of basic and applied research.

Criteria 3: Performance in the technical development and operation of major research facilities
Rating: Outstanding

LBNL is the site of two BES supported user facilities – the ALS and the NCEM. The ALS is one of the world's brightest sources of ultraviolet light and soft X-rays. Soft X-rays of the ALS are an ideal tool for probing a wide range of electronic structural studies and are particularly useful for x-ray microscopy, surface science, and solid state physics of carbides, actinides and oxides. Such regions of the spectrum also offer special opportunities for research in chemical physics, electron spectroscopy, microscopy, and holography. LBNL's performance for operating the ALS has improved significantly, as has their relations with the users and in scientific directions. Instrumentation of the ALS is taking place with several new beamlines coming on line and plans are being made for upgrades of existing beamlines. Also, the user community is much more involved in the development of new state-of-the-

art beamlines – in materials science, geoscience, and life science with support from other agencies, as well as BES. The ALS beamlines have provided a unique facility for studying photon-atom interactions as well as investigation of simple photodissociation processes that allow for understanding chemical dynamics. These beamlines are well subscribed by users external to the LBNL community.

The scientific output and user satisfaction from the NCEM has been outstanding, notwithstanding the inability to repair or replace the foreign made high-voltage transformer and power supply, partly because the manufacturer has discontinued this item. The NCEM provides instrumentation for high-resolution, electron-optical characterization of defects, nanostructures, phase transformations, thin films, surfaces, and microelectronic materials. The NCEM has made important contributions in atomic level spectroscopy, electron beam holography, electron nano-crystallography, and the atomic structure of interfaces.

Criteria 4: Programmatic performance and planning
Rating: Outstanding

The management of the basic research programs in the various divisions of LBNL has been timely, responsive, and forward looking as evidenced above by the outstanding rating for the quality of science that is produced (see Criterion 1). LBNL's management should be complimented for their response to the Basic Energy Sciences Advisory Committee (BESAC) panel report on the ALS. The changes they have made are all in the right direction. LBNL management has contributed in many ways to the Spallation Neutron Source Project – developing a new state-of-the-art ion source, providing valuable leadership from the Director of LBNL to assist a necessary change in the project leadership, and providing the expertise of others at LBNL who contributed to two crucial reviews of the project.

LBNL management is also to be complimented for their vision to extend the limits of electron beam microcharacterization with a new generation of unprecedented capabilities for dynamic in-situ microscopy, which will include energy-filtered imaging, holography and highly localized spectroscopy with high spectral resolution.

New LBNL management for the Chemical Sciences program has aggressively sought new funding opportunities and has been involved in significant planning for the future. Some of the latter has been the result of on-site programmatic peer reviews, but management has been aggressive, recently, in its concern for the long-term viability of the program.

Performance Area: Computing Sciences

Overall Performance Rating: Outstanding

Criteria 1: Quality of science:
Rating: Outstanding

Applied & Computational Mathematics

LBNL's applied mathematics research program supported by the DOE/SC Mathematical Information and Computational Sciences (MICS) Division is one of the premier applied and computational mathematics research efforts in the country. Laboratory applied and computational mathematicians develop enabling numerical algorithms and software for parallel and distributed computing platforms that are used by the national scientific and engineering communities, as well as by providing modeling and computing expertise to agency and national programs involving simulation science (SSI), national security (ASCI), materials science, genomic research, global climate modeling and simulation, turbulence modeling, and other large-scale scientific computing and visualization problems of importance to LBNL, DOE, and the nation. The expertise of the group is both broad and deep, enabling it to make lasting contributions to basic research in applied and computational mathematics, and to applied problems in fluid dynamics, materials science, combustion, and genomics of relevance to LBNL and DOE programs.

LBNL is a participant in the Materials Micro Characterization Collaboratory (MMC) pilot, an important element of which is the development of a common user interface and basis for accessing instrumentation at Materials User Facilities from off-site locations. The goal of the pilot is to introduce a new paradigm in scientific research, by developing a cohesive virtual laboratory accessible from anywhere on the Internet. This offers great potential for positively impacting the effectiveness of the facilities by making them more accessible and in some cases, more highly utilized. Significant progress has been made towards this goal. For example, the proposed architecture has been implemented on two instruments.

Technology Research

LBNL continues to study very important scientific questions and produce high-quality scientific results for the Laboratory Technology Research (LTR) program. A multi-year project at LBNL developed an x-ray microscope which has the world's highest resolution and the unique ability to distinguish coupled ferromagnetic/antiferromagnetic behavior in layered materials. A microscope that can study this fundamental magnetic coupling phenomenon should have significant impact in the basic science and technology of devices which control electron spin rather than charge. This year, three LBNL multi-year projects were subjected to a mid-program peer review. The results of the review demonstrated that all three projects had made good scientific progress. Accordingly, each project will be continued to completion as scheduled. Other indicators of productive research are publications, awards, and patents. LTR projects conducted by LBNL have been published in "Science," "Nature," and numerous peer-reviewed journals, as well as a large number of patents.

Over the past year, LBNL has been actively involved in a number of R&D projects that were initiated under the DOE 2000 program and both National Collaboratory Pilots, as well as in coordinating the effort across all participating organizations. This integration is a key element to assuring the success of the program and LBNL has shown leadership in this area. The distributed security architecture is an example of a project that is proceeding very well and has wide applicability and interest. Akenti is an access control mechanism designed to be flexible and easily controlled in providing strong access control to distributed resources. It relies on commercial products where possible, building on these to meet the specific requirements associated with scientific research. It is well coordinated with other related efforts in the department as well as outside, and the leadership shown in developing this keystone for enabling successful collaboratories is highly respected. Akenti is used in the Diesel Combustion Collaboratory and is being released in beta version to friendly users.

National Energy Research Scientific Computing Center (NERSC)

Though NERSC is not itself a research institution per se, the move to LBNL four years ago made it possible for the Center to integrate its duties of providing enabling computational resources for the broad scientific missions of the Office of Science, with research programs in the physical, life and medical sciences, and computational science and technology. The NERSC Center has established the lead in providing the largest unclassified high performance computing resource in the world. It is known for its efficiency, but even more for its effectiveness. There are now several research efforts in carefully chosen areas where the resulting technology is important to the operations at NERSC, but also in forefront areas where computational approaches will have substantial impact.

NERSC has begun several innovative efforts this year. In addition to the newly formed Center for Bioinformatics and Computational Geonomics, NERSC's effort to procure the next high performance computing system has had to contend with a changing high performance computing market. NERSC has been very innovative in this procurement and has established a process that other Centers will follow. Also for the first time, an innovative, peer-reviewed process was used to make a large fraction of NERSC resources available to the researchers of the highest quality, but not supported by DOE.

During the past year, the User Services staff became well versed in the science of some of the major applications. This strategy proved to be beneficial: a member of the NERSC User Services staff worked with Materials Science colleagues from other DOE Laboratories won the Gordon Bell. The Award recognized their work on the highest performance application code ever demonstrated, and thereby enabled a substantial advance in the understanding of magnetism and other properties of the solid state. Computing Sciences work on Personal Computer (PC) clusters has been very beneficial to many NERSC users, especially high energy physicists. The work of the Scientific Data Management Group, perhaps the foremost in the world, has had a major impact in High Energy Physics as well as Bioinformatics. NERSC is also closely associated with the recently formed LBNL Center for Bioinformatics and Computational Genomics, which is making substantial progress. In the area of Visualization and Imaging, the effort has been modestly funded and not very visible to NERSC users. This effort could be better organized (and funded), but should not be an area of major emphasis. NERSC should provide what the users show a strong need for, but since DOE has strong efforts in visualization and imaging at other sites, NERSC should suggest that its users look into these existing DOE capabilities.

Energy Sciences Network (ESnet)

External review committees continue to rate ESnet performance outstanding in all categories. The ESnet review committee found the sustained core services provided by ESnet to be outstanding in quality, based on both qualitative (user reports) and quantitative (network measurement) data. The cost-effectiveness of the ESnet also continues to be outstanding. Network capacity has been

consistently upgraded to provide a good service in the face of steadily increasing traffic and planned programmatic needs.

The ESnet is constantly being asked to "push the envelope" in networking technology and innovation by its user community and DOE HQ. There has been some reluctance by ESnet management to risk the stability of the production network in order to try new technologies. As a result, innovation has sometimes taken a "back seat."

Criteria 2: Relevance to national needs and agency missions
Rating: Outstanding

Applied & Computational Mathematics

The LBNL applied and computational mathematics research effort has been consistently successful in meeting and exceeding both long-term goals of developing analytical and numerical methods of fundamental value and wide applicability, and shorter-term goals that involve collaborations with LBNL, UC Berkeley, and DOE scientists on programs such as the Grand Challenges, national security (ASCI), and simulation science (SSI).

During the past year, the applied mathematics group, the large-scale computing group, and the advanced algorithms group have forged strong ties that will further strengthen their ongoing modeling, analysis and large-scale simulation projects. LBNL hired an expert from National Aeronautics and Space Administration (NASA) – Ames in performance evaluation and algorithm development for parallel and distributed computing platforms. This individual will serve as a bridge between Mathematical, Information and Computational Science (MICS) – supported applied and computational mathematicians and the more hardware-oriented computer scientists at the Laboratory. LBNL also hired a member of the Oak Ridge applied mathematics group who brings expertise in numerical linear algebra that complements the existing computational and modeling work at the NERSC. There is an emerging synergy among the various applied mathematics and computing groups that can only strengthen the LBNL applied mathematics effort. For example, LBNL's large scale computing group is working on turbulence simulation with the applied mathematics group and using these results to improve critical turbulence submodels in their diesel combustion collaboration with the advanced algorithms group and researchers from LLNL and New York University. LBNL is working to strengthen ties to the nearby Mathematical Sciences Research Institute (MSRI) in the areas of symbolic and geometric computing, in partnership with a MICS-supported researcher at MSRI. The Laboratory is also working to improve ties between the NERSC scientific computing group and the rest of the MICS-supported LBNL work in applied mathematics and computing. In sum, the overall LBNL applied mathematics program is poised for even greater successes in the years ahead.

LBNL researchers also interact regularly with industrial partners in the areas of semiconductor modeling and diesel combustion. Etching and deposition software for simulating chip design is used by engineers at Intel and National Semiconductor. This software stems from fundamental research on level-set and front-tracking numerical schemes developed over the years. The program continued its long-standing collaboration with the diesel engine manufacturers.

Technology Research

LBNL's Laboratory Technology Research (LTR) projects strongly support the DOE mission and initiatives. Examples include: high performance computing efforts in networking and domestic oil exploration and recovery; new cancer technologies, supporting medical and life sciences research

missions in biological dysfunction; and many projects concerned with synthesis and processing of advanced materials. As a specific example, a multi-year project will develop the Virtual Interface Architecture (VIA) software and hardware standard, which promises performance improvement over Internal Protocol (IP) by a factor of ten. VIA is a critical enabling technology for the next generation of high performance commodity off the shelf (COTS) clusters. COTS are important to the national laboratories for applications to scientific computing, both numerical and data-intensive. Another project will develop tumor reversal reagents by identifying a pathway which can affect reversion of tumor growth to normal cell function in human breast tissue. Partnering across science and technology programs is an important element to the goals of the MICS program. LBNL fully supports this partnering and provides effective championing of this goal within the broader community.

NERSC & ESnet
The national impact of the NERSC Center and the ESnet are large, and together they make a substantial contribution to the realization of the DOE research mission.

The NERSC Center has maintained its standing among the world's best high performance computing centers. The ESnet provides the connectivity between all the DOE research facilities, national laboratories, selected research universities, and international research partners, allowing DOE research to thrive in a collaborative, innovative and production-oriented environment. Concurrent research into rapidly developing high-performance computing and networking technologies also helps to ensure that these contributions to the DOE research missions can continue. The NERSC's R&D projects have been aimed at improving the computational capabilities of DOE's investigators, and this work is applicable to the needs of many other federal agencies. One example where the impact is being felt at other high performance computing centers, is the work done at NERSC over the last few years on High Performance Storage Systems, and the current effort to provide high performance I/O (input/output) for the NERSC-3 system.

ESnet is a leader in networking design and innovation, provides a major piece of the Internet backbone in the United States. It has a tremendous impact on national needs and agency missions by providing scientists and engineers access to DOE's unique, world-class accelerator, fusion, environmental, energy, computational and related facilities. ESnet is used as a test bed for advanced networking technologies and services. For example, ESnet is involved in ambitious distributed computing projects to support collaboratory and virtual laboratory technologies. Indeed, ESnet has become an essential element in the DOE complex of laboratories and university-based researchers.

Criteria 3: Performance in the technical development and operation of major research facilities
Rating: Outstanding

NERSC & ESnet
The NERSC is a major research user facility connected to its >2000 users primarily via the ESnet. The availability of the computational and storage services to the NERSC users is above 95 percent. The User Services is staffed with well-trained computational scientists with expertise in scientific areas important to DOE. It has been very successful in providing the nation's (if not the world's), most substantial computational resources efficiently and effectively to DOE researchers and engineers. Starting in FY 1999, the NERSC resources have been made available to the researchers of the highest quality but not supported by DOE for the first time. NERSC now faces the challenge of

commissioning the new IBM SP system (NERSC-3). It will require a substantial and creative effort to make this system an efficient high performance computing cluster – the work is going very well.

The ESnet process of establishing objectives, technical performance and user availability goals involve one of the most widespread collaborative efforts within DOE. Assessments of current and future user requirements, are obtained from DOE-supported principal investigators located at national laboratories and universities across the United States and at other research sites throughout the world. The breadth of services provided by ESnet – from basic bandwidth to directory services to email and videoconferencing support – requires a technically diverse support staff. The complex interactions of these technical experts, are overseen by an effective, efficient committee structure whose hallmarks are cooperation and synergy. The process of extensive collaboration and efficient committee structure, has allowed ESnet to meet and exceed user requirements and has dramatically improved the science performed at ESet connected sites.

Criteria 4: Programmatic performance and planning
Rating: Outstanding

Technology Research
Most R&D projects involve planning across multiple organizations. LBNL's technical management performance in this area was outstanding, and project milestones were met. Strong leadership participation from LBNL has been invaluable in helping maintain a cohesive collaboratory effort across all the R&D projects, the pilots, and the Advanced Computational Testing and Simulation (ACTS) projects. Progress was somewhat hampered by the temporary absence of a key manager. However, since he was assigned to NASA, benefits from working more closely with the Information Power Grid community was a balancing factor. Most efforts were completed in a timely fashion despite the fact that all funds budgeted were not spent. LBNL's collaborative activities within DOE are a positive contribution, and the Laboratory also interfaces well with others in the research community, outside of DOE, who are pursuing R&D in the same or similar areas.

Timely negotiation of Cooperative Research and Development Agreements (CRADA) is an important part of LBNL's efforts in conducting the Laboratory Technology Research (LTR) program. LBNL's performance in negotiating these agreements improved significantly in the past year, from an average of more than 8 months in FY 1998, to about 3 ½ months in FY 1999. LBNL took a strong interest in participating in a special initiative for Rapid Access Projects that emphasized the use of unique laboratory facilities and the solution of difficult technical problems by small businesses. LBNL submitted more proposals by far to this initiative than any other SC laboratory. The LBNL proposals were generally of good quality, and more of them were funded than any other laboratory. On its own initiative, LBNL also produced (with input from the four other SC multi-program laboratories) a presentation on the rationale for and the accomplishments of the SC LTR program. Responses to LTR program office requests for technical and program information were both timely and of high-quality.

NERSC
NERSC management has continued to focus on broad programmatic goals important to SC. More than 90 percent of the current staff are new to NERSC since its move to Berkeley in 1995. Concurrently, new work has been added to the NERSC Center, primarily for research efforts, not other operating tasks. The Center is now a more capable operation, but the speed of the transition from a "Power Station" to a "Fully Integrated High-End Computational Science Center" has meant that the staffing of the newer NERSC elements are not yet communicating with one another or with the

NERSC management in the most effective way. Efforts by NERSC management to address this would be valuable. There is much to be gained by more strongly incorporating the Energy Sciences Network (ESnet) in R&D concerning alternate computing strategies such as the "Computational Grid" Development. With the new IBM System nearly accepted, NERSC has again proved its ability to meet technical milestones and carry out work within the budget and schedules. NERSC has been cost-effective in its performance, responsive in meeting the Department's missions needs and also to changes in scope of the user/customer base, and appropriately disseminates its accomplishments.

The NERSC Center Director has kept morale high and provides effective leadership. He and his staff have been very successful in meeting the requirements of DOE and NERSC users. Overall the organization is effective and has provided efficient and effective use of the NERSC Center resources.

ESnet

The ESnet and its community have also demonstrated impressive innovation in management. Outstanding leadership and quality have been achieved at funding levels below those of similar efforts in other agencies. This is due both to Esnet management and to the working group structure that functions within the community. The latter has allowed the ESnet to "tap into" community expertise. The level of cooperation and coordination between these working groups, the steering groups, and the ESnet project staff is exemplary.

ESnet has a long history of planning for and meeting programmatic goals. The Program Plan, Strategic Plan, Progress Plan and Implementation Plan detail the DOE program requirements, the strategy to accomplish them, the progress made, and implementation details. These plans are reviewed and revised on at least a 3-year cycle, to ensure that ESnet continues to focus on DOE user community requirements and is making substantial progress in implementing the changes needed. This, coupled with active and regular user and steering committee meetings, ensures that ESnet stays focused on broad programmatic goals.

The ESnet project manager has been instrumental in keeping morale high and providing effective leadership. He has been very successful in mobilizing staff to meet unanticipated requirements, whether it is the rapid installation of connectivity to the Rayburn Building in Washington D.C., to quick identification and resolution of problems in the ESnet community. This dedication to the ESnet by the ESnet staff has been an excellent model for the community and a good reflection on DOE.

Performance Area: Nuclear Physics

Overall Performance Rating: Outstanding

Criteria 1: Quality of science:
Rating: Outstanding

The quality of the Science of the Nuclear Physics research program is considered to be excellent to outstanding. The staff of the Nuclear Science Division (NSD) continues to take leadership roles in the areas of nuclear structure physics (using the 88-inch Cyclotron and the Gammasphere, in relativistic heavy ion physics (at RHIC), and in solar neutrino studies (at the Sudbury Neutrino Observatory (SNO). The nuclear theory group conducts an excellent program of research, primarily on topics relevant to ultra relativistic heavy ion physics. Notable accomplishments include evidence (the discovery of two new elements Z-116 and 118 at the 88-inch Cyclotron, and the successful completion of the STAR and SNO detectors in which LBNL groups played important roles. The NSD has had an outstanding record in the dissemination of its research results: during a recent 15 month period, it published 189 papers in refereed journals, delivered 115 invited talks, and posted excellent descriptions of recent results via the Laboratory web site.

Criteria 2: Relevance to national needs and agency missions
Rating: Outstanding

The research and development program in NSD at Berkeley is focused on the highest priority areas in nuclear physics, as identified in the 1996 Long-Range Plan for Nuclear Physics. These include the development and utilization of the RHIC facility at Brookhaven, the SNO detector in Canada, and the Gammasphere Project (now at Argonne), and the development of a major radioactive beam facility. In all of these areas Berkeley is playing a major leadership role.

Criteria 3: Performance in the technical development and operation of major research facilities
Rating: Outstanding

The 88-inch Cyclotron has operated very successfully as a national user facility, particularly in the recent past when it was the site of the Gammasphere detector. Berkeley has been particularly successful in its overall management role for the STAR detector at RHIC and in the design and construction of major components of STAR, including the central tracking Time Projection Chamber. The large ($600 Million) STAR detector was completed on schedule and with budget.

Criteria 4: Programmatic performance and planning
Rating: Outstanding

The overall Program Management of the research program is considered to be excellent to outstanding. The NSD has positioned and repositioned itself over the years to lay significant roles in addressing high priority areas of research in the international nuclear physics effort. The Director has continued to move aggressively to very promising staff and to identify appropriate new initiatives.

Performance Area: High Energy Physics

Overall Performance Rating: Excellent

Criteria 1: Quality of science:
Rating: Excellent

The Physics Division (PD) has a major role in several key experiments in the U.S. High Energy Physics (HEP) program. These include BaBar at SLAC, which will study Conservation Parity (CP) violation, (Collider Detector Facility) CDF at Fermilab, which will continue studying the top quark, as well as having the potential to discover new physics, and ATLAS at the CERN LHC, which will study electroweak symmetry breaking. Also, the PD has the leadership of the collaborative Hyper CP experiment at Fermilab. The first run results were sufficiently successful to merit a second (and final fixed target) run that is expected to reduce uncertainties further. Members of the PD also contribute to the D-Zero experiments at Fermilab which include measurements of the mass of the top quark and of the W-particle. Contributions by LBNL to the detector system have lead to a 40 percent increase in the W-mass database and a reduction in systematic errors.

The Super Nova Cosmology project, led by LBNL, continues to have high visibility and has earned "Break Through of the Year" recognition. This work and that of the Cosmological Microwave Background group were also been cited in the January issue of Scientific American.

The laser-based acceleration studies in the Center for Beam Physics in the Accelerator and Fusion Research Division (AFRD) continues to receive high praise at the annual reviews and is expected to soon demonstrate controlled acceleration of injected electron bunches by a laser-driven plasma.

We are concerned with the recent decline of the Physics Division Theory Group, which appears due to retirements and outside involvement by the remaining group members. Continuation of this situation could adversely impact the HEP program, particularly in the generation of new and exciting concepts and in the interpretation of experimental results. The PD management has been advised of this, and we anticipate positive actions.

Criteria 2: Relevance to national needs and agency missions
Rating: Outstanding

LBNL is a key player in several HEP-relevant, multi-laboratory collaborations, including particle detector development, the US contribution to the CERN Large Hadron Collider (LHC) project, Next Linear Collder R&D, and Muon Collider R&D.

LBNL is a U.S. Leader in the development of silicon tracking detectors, and has undertaken major responsibilities for the silicon tracking systems of BABar, CDF, and ATLAS.

The Detector Instrumentation Division (DID) is developing advanced electronics and components essential for HEP detectors and also has developed large area charge couple devices with high sensitivity in the infrared, needed in the Super Nova search for distant, highly red-shifted events.

The Particle Data Group continues as the world's clearinghouse for the results of HEP experiments. They have expanded the use of the World-Wide Web for rapid dissemination of the collected data for education and outreach.

In the PD, the Future Options Working Group has been looking at possible future roles for LBNL in the scientific opportunities with high relevance to the HEP community. This positive effort and the initial survey results are generating feedback.

Criteria 3: Performance in the technical development and operation of major research facilities
Rating: Outstanding

Although LBNL no longer operates a major research facility for HEP programs, the PD, AFRD and DID are all major contributors to the technologies essential to HEP programs. These technologies are used to support major facilities at other laboratories with major contributors to the technologies being essential to HEP programs. LBNL is a major collaborator on the highly successful PEP-II asymmetric electron-positron collider and the recently installed BaBar detector at SLAC. LBNL's contributions to the US part of the LHC accelerator effort are of good quality and essentially on time. LBNL contributes to the design and construction of components for the CDF upgrade at Fermilab. LBNL has a major role in the development of silicon detectors for ATLAS. The LBNL hardware contributions to the D-Zero upgrades at Fermilab are nearly complete and they are now contributing to component testing and software development.

LBNL continues a vigorous program of R&D for the future HEP facilities, such as particle detector components and electronics and for advanced accelerator technologies.

Criteria 4: Programmatic performance and planning
Rating: Good

LBNL's record in meeting technical milestones is excellent. They are also forward thinking in planning, on a technical level, as exemplified by laboratory support for the laser-plasma accelerator research program.

LBNL submitted 341 documents to OSTI this year, with 50 of them being highly relevant to HEP programs in accelerator technology R&D, high energy physics research, and detector development. This number of papers is more than commensurate with the HEP share of the DOE-sponsored portion of the LBNL budget.

However, in terms of effectiveness of organization, there has been at least one where a technician, highly trained in areas specific to a HEP program, has been reassigned elsewhere, over the objections of the principal investigator and to the detriment of the HEP program. This appears to be a problem with the "Matrix Management" of the technical staff at LBNL.

Concerning the efficiency of facility operations: The laboratory has committed up to $2 million in internal funds toward (as yet uncompleted) renovations of an old building (Bldg. 51) to provide expanded facilities desperately needed for the high-field superconducting magnet group, a key contributor to HEP programs for future accelerator options. Not only has remediation of this space required more effort and time than originally planned, but we have recently learned that the lab is considering tearing the building down, which would jeopardize a key HEP program, as well as negate the lab's current investment. This raises questions about LBNL's long term facilities planning strategy. Based on the negative impact of the last two items on an otherwise excellent performance toward goal 4, this work is rated as **good**.

Performance Area: Fusion Energy Sciences

Overall Performance Rating: Outstanding

Criteria 1: Quality of science:
Rating: Outstanding

The Fusion Energy Research Group at LBNL has had the DOE lead for developing heavy ion drivers for Inertial Fusion Energy (IFE) for many years. Their work, which is described through journal publications and presentations at topical conferences, is recognized internationally. The physics of heavy ion beams is imbedded in the more general scientific topic of non-neutral plasmas and the main thrust of LBNL physics research is to develop the understanding, both theoretical and experimental, which will allow the future application of this approach to fusion energy production.

Experimental work continues to be of high quality, using existing facilities to bring together different aspects of producing, transporting, and focusing beams in a way to provide information useful in understanding beam dynamics necessary for future systems. With limited funding, these are of necessity scaled experiments and the necessary interplay between experiment and theory has been successfully carried out.

One goal of the program in which significant progress has been made is in developing end-to-end simulation of heavy ion driver systems. In carrying out this task, LBNL maintains close liaison and work with the broader accelerator community. There has been a consistently high degree of innovation in addressing IFE problems.

The scientific effort carried out at LBNL is coordinated with LLNL under a Virtual National Laboratory (VNL) for Heavy Ion Fusion. The agreement for this arrangement was signed in December 1998 and will lead to a cost-effective use of technical staff. Research staff from LBNL actively participated in community activities, including the fusion summer workshop at Snowmass, aimed at providing integrated consensus technical plans for future fusion programs.

Recent work has been directed at providing the basis for an accelerator-based program called the Integrated Research Experiment. The path along which DOE would proceed to consider such a program is unclear, because of funding and other considerations, but the scientific work carried out at LBNL (and LLNL) is preparing the basis for such a program.

Criteria 2: Relevance to national needs and agency missions
Rating: Outstanding

Inertial fusion energy research at LBNL is in direct support of DOE and Office of Science goals. Because of the importance of making fusion energy cost effective and reliable, LBNL has been working with industrial, university and other laboratory partners in identifying accelerator components

for which long range scientific and technical developments can have significant cost and performance impacts.

Criteria 3: Performance in the technical development and operation of major research facilities
Rating: Outstanding

The inertial fusion energy group does not operate user facilities. However, LBNL, through their institutional plans and field work proposals, has proposed an initiative which would lead to an Integrated Research Experiment which would be focused on critical elements of heavy ion based research program. These elements include the scientific basis for a full-scale driver, validation of beam target interaction physics and exploration of areas of target physics. This type of detailed and careful planning is necessary within the context of the goals of the fusion energy program.

Criteria 4: Programmatic performance and planning
Rating: Outstanding

The IFE program at LBNL has had to respond to restructuring of the fusion energy sciences program since FY 1996 as well as significant funding fluctuations prior to this time. The leadership of the program has responded to these conditions by maintaining focus on critical, long-range elements of the program. The new VNL will contribute significantly to providing continuing focus in the program.

Performance Area: Civilian Radioactive Waste Management

Overall Performance Rating: Outstanding

Criteria 1: Quality of science:
Rating: Excellent

The quality of the science by LBNL for the YMP is generally of high quality. Specific examples of challenging tasks done well are the Unsaturated Zone Flow and Transport tests and associated modeling, and the Drift Scale Test and associated modeling. However, the term "quality" in relation to the YMP has a very special meaning. The performance of LBNL in meeting these quality assurance (QA) requirements has noticeably improved over prior years, and one reviewer noted that LBNL was showing leadership to the other labs in this area. In summary, work that is clearly excellent to outstanding in the absence of the clear quality requirements of the Yucca Mountain Project causes this evaluation to be lower than the highest attainable ranking. The YMP looks forward to, and is relying upon continued improvement by LBNL in QA.

Criteria 2: Relevance to national needs and agency missions
Rating: Outstanding

The relevance of the work at Yucca Mountain to the national needs and agency mission is **outstanding**. LBNL Unsaturated Zone Flow, Seepage, and Transport work is always identified as a critical part of the safety case at theYMP.

Criteria 3: Performance in the technical development and operation of major research facilities
Rating: N/A

Criteria 4: Programmatic performance and planning
Rating: Outstanding

In order to accomplish quality science and engineering, the planning and performance must be commensurate. Such has been the case for LBNL, although as noted above, performance was improving, but not outstanding in meeting the quality requirements. However, the evaluation for Element 1 above reflects the performance for quality assurance, and the evaluation for this Element will not doubly reflect that performance.

Almost all the YMP reviewers agreed with in the Independent Peer Review's assessment of LBNL's "can-do" attitude and approach. There are multiple national labs involved in the project, and the DOE project staff commonly will look to LBNL first because of the performance, quality of science, and leadership in getting hard tasks accomplished well.

Performance Area: Fossil Energy

Overall Performance Rating: Excellent

Criteria 1: Quality of science:
Rating: Excellent

The excellent quality of LBNL research is demonstrated by the applicability to solve petroleum industry issues and problems. Millions of dollars of cost savings for industry and ultimately end-users are being realized from a LBNL project dealing with California State requirements for monitoring vapor emissions from heavy oil industry tanks. Other examples include LBNL efforts to collect data to help regulators set reasonable limits on hydrocarbon contamination clean-up and work to help reduce well-bore failure in California heavy oil fields. The industry review panel, which reviews most projects on an annual basis, gave all of LBNL projects excellent comments.

Criteria 2: Relevance to national needs and agency missions
Rating: Excellent

The relevance of all projects is determined by industry review. All LBNL work was considered highly relevant to national need and Departmental mission.

Criteria 3: Performance in the technical development and operation of major research facilities
Rating: Excellent

LBNL did an excellent job of providing space and support to relocate the imaging laboratory to the LBNL site from the now closed National Institute for Petroleum and Energy Research (NIPER) in Bartlesville, Oklahoma.

Criteria 4: Programmatic performance and planning
Rating: Excellent

Most of the projects funded by the oil program are through the National Laboratory Partnership Program. These projects were given excellent ratings by the industry panels who review plans and performance of projects annually.

Performance Area: Energy Efficiency and Renewable Energy

Overall Performance Rating: Excellent

Criteria 1: Quality of science:
Rating: Outstanding

OPT/EE-10:
LBNL contributed to the first-year start-up of the DOE Transmission Reliability Program by authoring a Scenarios white paper that was one of six research needs and assessments white papers providing the framework and context for the other five. The paper was extremely well written, and its presentation at a National workshop to review these papers focused discussions that directly resulted in further contributions to the Program.

OIT/EE-20:
Not applicable because of the nature of activities that are evaluated and funded by this program office.

OTT/EE-30:
Exploratory Technology Research (ETR): Work performed by LBNL researchers in the field of advanced energy storage devices for transportation applications is well recognized in the scientific community. As an example, researchers of the Exploratory Technology Research (ETR) program, using results of in-situ spectroscopic techniques were the first to suggest that there is a permanent formation of a solid electrolyte interface (SEI) layer on the surface of carbon. It is well recognized in the electrochemistry field that fully understanding the role of SEI on electrochemical properties of the carbon anode will help developers to significantly improve the performance of lithium-ion batteries.

Fuel Cell Catalysts: Work on characterization of fuel cell catalysts is of outstanding quality scientifically. Work has led to greater understanding of the mechanisms and kinetics of fuel cell catalysts. This project is evaluated annually by an advisory panel including expert representatives from industry, government, and academia. The most common response in the evaluations is the high scientific quality of the work. The Principal Investigator is recognized worldwide for his expertise and has addressed a major technical barrier to reformate fuel cell technology—carbon monoxide poisoning.

Lightweight Vehicle Materials: The LBNL group appears to be on the forefront of applications of Non-Destructive Evaluation (NDE) to automotive applications. The group has published four excellent papers in FY 1999, and the group's competence is recognized and relied upon by the Big Three automobile manufacturers.

OBTSCP/EE-40:
Appliance Standards: LBNL developed marginal energy prices for residential and commercial consumers for use in the appliance rulemaking analyses. This work was both innovative and of high quality. LBNL also developed new models to estimate primary energy savings and the resulting atmospheric emissions reductions. Additionally, models and analyses were developed regarding

shipments and elasticities for clothes washers and water heaters. Various presentations were well received and given to explain the above analyses and models to the DOE Advisory Committee, public workshops and to industry groups.

Lighting: LBNL projects have been decidedly in the applied research, engineering and development arena for the last several years, rather than in basic science or technology. Applied research in the field evaluation of lighting controls is technically of high quality and may lead to a national leadership position in this important area. This work embodies a moderate level of technical challenge. Projects on improved luminaries consist of engineering and optical design work, which is quite creative but, is of low technical challenge. This work, however, finds a high level of support among the manufacturing community, and LBNL has established a leadership position in this area. Laboratory work to assess the potential of an innovative ballast circuit design for compact fluorescent lamps was of high quality. The quality of science is good but room for improvement exists and should be a priority.

Windows: The quality of science as measured by peer reviews was consistently ranked in the higher performance categories. LBNL maintains several unique research facilities (the Mobile Window Thermal Test Facility (MoWiTT), the Optical Properties Laboratory, and the Infrared (IR) Thermography Laboratory). These facilities were utilized effectively to meet research needs by LBNL staff for industry. A critical objective is to support the development of performance evaluation procedures recognized for their technical excellence, and to facilitate harmonization of standards and acceptance of improved standards by industry. For example, DOE intends to maintain the Optical Properties Laboratory as the premier optical characterization and measurement facility in the world. This facility will be used to maintain the quality of the NFRC Optical Properties Database. Recent round robin tests of glass properties have raised concerns. To date, LBNL has been very responsive to these concerns and is working with the research community to assure that the technical excellence and usefulness of its facilities are maintained. Future evaluations will follow this progress. Moreover, LBNL expanded the capabilities of the IR Thermography laboratory with a focus on increased understanding of fenestration system performance (developing procedures to determine local film coefficients) and on extending existing capabilities to related applications (photovoltaic systems, automobiles). This unique facility continued to be recognized internationally with a Norwegian visitor arriving at LBNL to use it for six months to study frame cavity heat transfer. A peer review highlighted the IR facility's achievements and strongly recommended increasing its capabilities (larger samples) next fiscal year.

In addition, LBNL's world class expertise in the area of commercial building fenestration and daylighting was recognized with a national award for Architectural Research on integrated fenestration systems. The first ever solid-state reflective electrochromic device was developed at LBNL this year and promises to advance the future impacts of electrochromic devices.

Indoor Environment: The LBNL group had numerous publications in peer-reviewed scientific journals. One particular note for 1999 was the 22 presentations made at the triennial Indoor Air Conference. The DOE peer-review process in 1999 recognized high scientific merit of the LBNL Indoor Environment group. On-site experimentation is of high quality. The laboratory fume hood is a notable example. Field experimentation is also high quality.

Criteria 2: Relevance to national needs and agency missions
Rating: Excellent

OPT/EE-10:
Electric reliability is among the highest priorities at the DOE during the electric industry's transition to competitive markets. Work to support the Transmission Reliability Program, and thus LBNL's efforts in this area, is the focal point for electric system reliability research and development (R&D) for DOE. The DOE Under-Secretary's analysis of DOE's energy R&D portfolio emphasized the increased need in this area to meet system-reliability goals.

OIT/EE-20:
The funded activities are consistent with EERE strategic international approaches in the international area, namely: (1) addressing emerging global environmental and energy issues; (2) promoting trade and market development; and (3) promoting energy and environmental security. LBNL has provided technical support and policy assistance to China and South Africa through the Motor Challenge approach to improve their industrial electric motor systems efficiency. For example, a very successful motors workshop was conducted in South Africa directly resulting in expressed interest in follow-up activities. Interaction with China has been very fruitful; a second workshop has been planned for FY 2000 and China is considering adding a Motor Challenge-type program to its tenth five-year plan.

OTT/EE-30:
Exploratory Technology Research (ETR): Work performed at LBNL addresses the barriers that hamper the successful development of advanced batteries for electric hybrid vehicles. To better serve the needs of other DOE battery technology development programs, in FY 1999 the ETR program was reorganized into core tasks and focused tasks. The objective of the focused tasks is to support the lithium-ion and lithium-polymer battery technologies that are being developed under the United States Advanced Battery Consortium (USABC) and the Partnership for the Next Generation of Vehicles (PNGV).

Fuel Cell Catalysts: Work is critical to the development of fuel cells for automotive applications—a technology with tremendous potential for the U.S. environment, economy, and energy future. More interaction with industry to transfer the knowledge into development of improved catalysts is suggested.

Lightweight Vehicle Materials: The LBNL group has a clear and precise understanding of program mission and the project's role in it.

OBTSCP/EE-40:
Appliance Standards: LBNL has been flexible and adaptable in meeting the changing focus and needs of appliance analyses. They have also been cooperative with other laboratories and contractors who have been involved with rulemakings. One area needing slight improvement is the requisite to freeze analytical results when milestones, such as a workshop, are reached, even though analytical improvements still could be made.

Lighting: Lighting technology has a high relevance to national needs and agency missions. Lighting accounts for a very significant fraction of energy use in the buildings sector. Improvements in energy efficiency tend to embody considerable technical challenge. Much of the LBNL work is addressing

some of the more significant opportunities to save energy, but is not always sufficiently focused and disciplined to achieve major advancements. Some work is targeted to incremental improvements in product efficiency rather than more fundamental and lasting improvements. In some respects, the program is spread too thinly across diverse program elements.

Windows: In 1999, the American Council for an Energy Efficient Economy (ACEEE) published a study identifying the five most successful DOE projects of the 1990s. One of these was the development of spectrally selective glazings, a program area in which LBNL played a primary role, as noted in the report. LBNL continued to play a critical role providing technical support to industry associations (the National Fenestration Rating Council (NFRC), the Efficient Windows Collaborative (EWC), the Primary Glass Manufacturers Association (PGMA)) supporting DOE goals. LBNL's technical expertise is carefully focused on issues that address meeting national energy efficiency needs. LBNL accomplishments include: training NFRC simulators; leading NFRC efforts to develop an annual energy rating; documenting skylight energy performance; developing the technical base for determining a condensation resistance index; expanding the NFRC optical properties database; developing new content on window selection and efficient window energy and energy-related benefits for the EWC website; and development of a spectrally selective low-emissivity detector. In support of NFRC and EWC energy savings objectives, LBNL continued to expand the capabilities of its software (RESFEN 3.1 and Optics5 final beta released, and WINDOW5 alpha developed). LBNL leadership in standards organizations (independent system operators (ISO), American Society for Testing and Materials (ASTM), and the American Society of Heating, Refrigerating, and Air-Conditioning Engineers, Inc. (ASHRAE)) ensures industry procedures capitalize on state-of-the-art algorithms and consistency between standards, software, rating systems, and product development. LBNL plays a critical technical oversight role that is important if the electrochromics initiative is to achieve overall mission goals.

Indoor Environment: Work with professional groups such as ASHRAE contributes significantly to DOE's charge under the Technology Transfer Act of 1996, through which agencies are encouraged to support an industry consensus process in lieu of setting their own standards and guidelines. Work with the EPA contributed to national environmental goals while avoiding conflict with DOE energy policies or missions.

Design Tools: Sometimes LBNL gets distracted or more interested in their needs than those of the Department or National needs.

Criteria 3: Performance in the technical development and operation of major research facilities
Rating: N/A

Criteria 4: Programmatic performance and planning
Rating: Excellent

OPT/EE-10:
The performance of LBNL from senior management through program management has been truly outstanding in all regards. LBNL led the formation of the Consortium for Electric Reliability

Technology Solution (CERTS), which consists of four National Laboratories, an electric industry partner, and six universities. Moreover, LBNL provided the Program Office management for CERTS, managed the coordination of CERTS to produce six outstanding white papers on electric reliability and a successful workshop, and leveraged DOE funds to obtain matching funds through an industry-coordinated proposal to a State research agency. CERTS also responded to provide technical experts to staff the DOE Secretary's Power Outage Study Teams.

OIT/EE-20:
LBNL has done an excellent job in meeting performance measures in the international area. In spite of difficulties in conducting activities in the international arena, work has been carried out within budget and on schedule. Planning for continuation of work has been excellent. Examples include the electric motor systems work with China, and relationships with international contacts and U.S. organizations such as the International Institute for Energy Conservation (IIEC) and Technology Cooperation Agreement Pilot Program (TCAPP). In addition, LBNL has been very responsive to the requests by DOE/EERE in support of international agreements and U.S. initiatives.

OTT/EE-30:
Exploratory Technology Research (ETR): In addition to work that is carried out at LBNL, the ETR program includes other research activities that are being done at universities and other government agency laboratories. As always, LBNL has managed these contracts efficiently. This includes the evaluation and awarding of contracts as well as integrating their results into research activities at LBNL in particular, and the ETR program as a whole. The Annual Operating Plan was well prepared. The quality of the quarterly reports is excellent and the milestones and statuses for each task are thoroughly discussed.

Fuel Cell Catalysts: LBNL work in this area is a relatively fundamental project for the larger program. In general, the sponsoring program office has been extremely satisfied with the planning and performance. An important opportunity for improvement is mutual cooperation to improve the technology transfer aspect in order to link the fundamental knowledge directly to a path for development of improved catalysts.

Lightweight Vehicle Materials: The LBNL group has met all milestones on time and within budget, while doing close planning with the Big Three automobile makers.

OBTSCP/EE-40:
Appliance Standards: Goals and milestones were accomplished on schedule and within budget.

Lighting: There has been measurable improvement in attention to milestone accomplishment in FY 1999. Significant room for improvement continues to exist in the area of programmatic performance monitoring, performance reporting and strategic planning. Project proposals are submitted too late with insufficient detail for the sponsoring organization to make major funding decisions. Periodic performance reports are infrequent, uneven and delivered far too late (3 to 6 months) to permit adequate evaluation by the sponsor. Little short-term or long-term strategic planning has been articulated to establish a long-range plan and overcome key scientific staffing deficiencies. Collaboration with other centers of excellence needs to be strengthened within the long-range plan. Laboratory management must focus attention on this area of performance and devote adequate resources to achieve improvement.

Presently, the technical development of facilities has been hampered by the significant deficiencies in long-range program planning. Opportunity for greatly increasing user participation in the luminaire

research facilities should be explored. Also, improvements in information dissemination to sponsors and to users should be a priority. In general, the technical development of facilities beyond current capabilities needs to be an integral part to long range plans for LBNL program efforts.

Windows: Significant improvements in the submission of monthly reports have occurred since they have been posted on a private management web site. Previously, paper copies of monthly reports were received several months late, and were effectively worthless. The contractual requirement for monthly reports is that they be posted within 10 days of the end of the month. If the entire report cannot be posted in a timely fashion, the completed portions should be posted on time, with the remaining sections following shortly upon completion. To date, some reports have been a few weeks late. Furthermore, because of the need to minimize uncosted funds, proposed statements of work must be submitted on time. The contractual requirement is submission of a draft by July. A draft SOW for FY 2000 was submitted much earlier this year but not in July. Future evaluations will pay close attention to the timely submission of monthly reports and statements of work. In general, it should be noted that LBNL staff has been consistently responsive in providing technical materials to DOE in response to rapid turnaround information requests from DOE.

LBNL staff provides key technical management support to DOE for the Electrochromics initiative. LBNL works effectively with the NFRC, the EWC, PGMC, SIGMA and other industry members to understand and prioritize industry research and technical support needs. One area of concern that occurred in FY 1999 was the failure to have a review by technical experts of the WINDOW 5 software. This review was a contractual requirement. Because of the significant resources that are committed by both DOE, industry and the entire user community, both domestic and foreign, to window rating software, it is important that LBNL adhere to sound management approaches in the development of software. This is not to deride the quality of the software and its development team, but to question the broader management process. Future evaluations will consider progress in these matters, and responsiveness to DOE priorities for window rating software. Finally, LBNL should be commended for the successful adoption of THERM software in the U.S. by NFRC, as well as adoption in other countries, and for the support provided by LBNL in training the industry on this new software.

Indoor Environment: Expected deliverables were clearly established in the beginning of the year. Progress was clearly reported.

Design Tools: Better planning and communication is required since agreed delivery dates are often not met.

Operations & Administration

Performance Area: LABORATORY MANAGEMENT

Performance Objective: #1 Laboratory Leadership

Laboratory leadership, in support of Laboratory missions, ensures the stewardship and viability of the institution. **(Weight = 100%)**

Criteria: 1.1 Institutional Stewardship and Viability

Evaluation of Laboratory senior management's approach, deployment and results for ensuring that the institution is capable of executing its current and future missions. **(Weight = 100%)**

Performance Measure: 1.1.a Planning

Evaluation of management's approach for strategic planning that aligns Laboratory missions, core competencies, strategic direction, and funding sources with DOE strategic plans and objectives. The assessment will focus on achievement of the key objectives contained in the Laboratory's plans and how this information is reviewed with DOE. **(Weight = 17%)**

Performance Gradient:

Weighting for Approach/Deployment and Results:
A/D = 40%
R = 60%
Gradients (see table1)

Performance Narrative:

Approach/Deployment
LBNL continued a strong set of planning activities in FY 1999 that remain recognized as "best-in-class" among Office of Science (SC) laboratories. The Berkeley Laboratory's Vision 2010 and the numerous strategic initiatives highlighted in the FY 2000-2004 Institutional Plan (IP) build upon core laboratory competencies and assets, support the multi-program mission needs of key sponsors, pursue leading-edge emerging scientific opportunities in a broad range of fields, and are very well integrated and aligned with the new SC Strategic Plan and Science Portfolio. LBNL's Vision 2010 is comprised of five key areas unique to the Laboratories role within the DOE system of laboratories:

- Quantitative Biology
- Complex Systems (Nanoscience)

- Fundamental Understanding of the Universe
- New Energy Sources and Environmental Solutions
- Integrated High-Performance Scientific Computing

The Laboratory's IP continues to be notable for its strong focus on innovation, and for being thorough yet concise. Laboratory leaders and planning staff made significant contributions to the development of DOE/SC planning documents. These in turn supported SC's efforts to improve Government Performance and Results Act (GPRA) implementation for basic research and development. LBNL's annual Institutional Plan, Laboratory Directed Research and Development (LDRD) Plan, field budget proposals, and numerous other operational plans (in facilities; environment, safety and health (ES&H); security, et al.) are communicated to and reviewed by the DOE Berkeley Site Office (BSO), Oakland Operations Office (OAK), and DOE/HQ.

In March 1999, Laboratory Director Shank co-hosted, with the DOE Associate Director of the Office of Basic Energy Sciences, a national Workshop on Complex Systems at LBNL. This nascent and interdisciplinary field would build upon the basic research strengths of the Laboratory in the physical, biological and information sciences, and begin to realize the immense promise of nanoscience and nanotechnology in the 21st century.

Beginning in FY 1999, the National Energy Research Supercomputer Center (NERSC) initiated a new planning approach for allocating a 40 percent share of its annual computational resources through a competitive peer-reviewed process that accepts applications from non-DOE/SC funded researchers. A key aspect of LBNL's Vision 2010 is to integrate advanced, high-performance scientific computation into all its areas of research, adding a new, third method for scientific discovery and advancement to complement theory and experiment.

LBNL is unique within the DOE laboratory system in neighboring a major research campus, UC Berkeley (UCB). Many Laboratory researchers hold joint professorship appointments at UCB. The Berkeley Laboratory's planning seeks to leverage connections to UCB through a growing number of collaborations, particularly in the life sciences. Beginning in FY 2000, LBNL will begin to play an important role in a major new ($0.5B) multi-disciplinary UC Health Initiative aimed at health care advances through various basic sciences. The Laboratory's strategic thrusts toward Quantitative Biology and Complexity/Nanoscience in its Vision 2010 are ideally aligned to support and leverage this initiative.

The LBNL Director, Deputy Directors, and other Laboratory managers continued to strongly embrace and support the importance of partnership with its external customers and stakeholders – partnerships with DOE (HQ, OAK, and BSO), with the local community, and in collaborations with other DOE laboratories and research institutions across the U.S. and around the world. The Berkeley Laboratory has strongly supported DOE's "integrated system of laboratories" by contributing its expertise in accelerators and detectors to major projects at other DOE laboratories, including:

- Spallation Neutron Source (SNS) at Oak Ridge National Laboratory (ORNL)
- Dual-Axis Radiographic Hydrodynamics Test (DARHT) facility at Los Alamos National Laboratory (LANL)
- Assymmetric B Factory at the Stanford Linear Accelerator Center (SLAC)
- Relativistic Heavy Ion Collider (RHIC) facility at Brookhaven National Laboratory (BNL)
- Tevatron at Fermilab.

The Laboratory supports other DOE program plans and objectives by contributing to the:

- Large Hardron Collider (LHC) at CERN (Switzerland)
- Sudbury Neutrino Observatory (SNO) (Ontario)
- Yucca Mountain Project (YMP) for fission reactor waste at the Nevada Test Site
- Joint Genome Institute Production Sequencing Facility (JGI-PSF) in Walnut Creek, CA
- other domestic and international R&D collaborations.

In FY 1999, LBNL supported the completion of the (safety and health) external regulation pilot study with the Nuclear Regulatory Commission (NRC), Occupational Safety and Health Administration (OSHA), California OSHA, and the California Department of Health Services (Cal-DHS). LBNL was the only DOE laboratory to have such a pilot conducted for the entire institution, and the Berkeley Laboratory was proactive in its support. Given the Laboratory's inherent geographical space constraints, site planning and space utilization plays an increasingly important role in LBNL's ability to support the needs of growing and changing programs. LBNL develops and maintains stategic (20 year), near-term (5 year), and annual plans for managing facilities, including space needs and allocations, and budgets for operations and maintenance.

Results

LBNL's planning and leadership focus efforts have resulted in a number of scientific and operational successes that contributed to achieving DOE objectives in FY 1999. Scientific use of the Advanced Light Source (ALS) continued to grow robustly and new opportunities identified in the 1998 ALS Science Roadmap are being pursued, e.g., a significant new beamline was operated for the Macromolecular Cystallography Facility, and new beamlines to support post-genomic structural biology research are being constructed. Execution of the ALS planning roadmap, coupled with ongoing Laboratory management attention and new leadership at the ALS, resulted in a significant positive turnaround in that major facility's operation in the past two years. The JGI slightly exceeded its sequencing goal of 20M base-pairs for the year, moved into the PSF that was dedicated by the Secretary of Energy in April 1999, and is negotiating for expanded space in order to meet commitments to support completion of a draft of the human genome in FY 2000. The effort for a major new civilian computational program, the Scientific Simulation Initiative (SSI) in which NERSC would play a key role, was not successful in receiving funding in FY 2000.

In August 1999, the Director of DOE's Office of Science recognized the Head of LBNL's Office of Planning and Communications for his outstanding support and exemplary personnel commitment to the Office of Science strategic planning process over the past several years. That national effort resulted in the June 1999 publication of the SC Strategic Plan and Science Portfolio. It has also contributed to DOE's ongoing effort to develop R&D Roadmaps. LBNL's mission profile and roles in DOE's Strategic Laboratory Missions Plan were also updated.

Besides strategic planning, during FY 1999 LBNL had to engage in considerable adaptive, "tactical" planning and response to a number of new DOE and Congressional concerns and requirements including: security (foreign visits, export control, cyber-security), project management, cost controls on travel, the Laboratory's Washington DC office (leased space and personnel), conference management, and others. Some of these are still open issues awaiting final policy guidance from DOE HQ. To its credit, LBNL's leadership has been reasoned and swift in its responses and, as appropriate, implementation of new requirements. The Laboratory provided feedback on the potential for adverse impacts resulting from some of the new mandates to the highest policy levels in DOE. In the foreign visitors area, this was critically successful in getting LBNL placed among "Tier III" DOE laboratories with no classified work onsite. This action was critical to preserve the Laboratory's open and highly international research environment, and the close connections with UC Berkeley and other research campuses that have long been a unique hallmark of LBNL among DOE laboratories. Some of the

other mandates are statutory in the FY 2000 appropriation, and LBNL has been developing implementation strategies while awaiting final DOE guidance.

Within operations, the full institutionalization of Integrated Safety Management (ISM) at LBNL resulted in DOE providing the Laboratory with a Phase II (effectiveness) validation of it's ISM program in June 1999. Several Laboratory and University of California (UC) personnel were recognized by HQ/EH for their contributions to the external regulation pilot study. While a political decision to proceed with external regulation has not been made at this time, the pilot study was effective in identifying the range of issues to be settled and the key decisions necessary to transition to external regulation. Notable progress was realized during FY 1999 in offsite facilities planning: the Laboratory's administrative support divisions were consolidated into a single facility, Berkeley Tower (building 937) in downtown Berkeley, and a new building lease was signed for the Berkeley Laboratory's Oakland Computing Center to house the growing NERSC systems as well as the Lab's administrative computer systems.

Performance Rating (Adjectival)**: Outstanding**	98.00%

Performance Measure 1.1b Establishing and Communicating Performance Expectations

Evaluation of management's effectiveness in establishing and communicating performance expectations. Assessment will focus on communication with Laboratory line management and senior management at the DOE Headquarters, Operations Office, and UC that reinforces performance goals.

(Weight = 11%)

Performance Gradient:

Weighting for Approach/Deployment and Results:
A/D = 40%
R = 60%
Gradients (see table1)

Performance Narrative:

Approach/Deployment
LBNL leadership participates in a large number of standing meetings with existing groups, councils, and other forums to maintain two-way communications with DOE/HQ, OAK, BSO, and UC on progress, policies, funding, operational issues, and other significant matters that impact programs, projects and/or the institution. These include the annual DOE/SC Institutional Planning On-Site Review, Executive Management meetings nearly every month between top LBNL and OAK managers, and a bi-monthly Executive Streamlining Group meeting involving the Laboratory Deputy Director for Operations, several OAK Assistant Managers, the BSO Director, and members of their staffs. LBNL senior managers also participated in a number of DOE inter-laboratory committees and groups dealing with laboratory operations, computing, facilities, and planning. There are also close communications and regular conference calls between public affairs officials at the Laboratory and in DOE/HQ and OAK, and between ES&H officials at the Laboratory, in DOE OAK, and at UC. The LBNL Director and Deputy Directors attend regular meetings and/or are members of several UC executive-level Councils and Groups.

Within LBNL, Laboratory leadership maintains communications with line managers and division management through regularly scheduled meetings including: weekly Director's Action Committee, monthly division directors meetings, and weekly Operations meetings. Various venues are also used by Laboratory management to communicate directly with employees, including: Director Shank's annual State of the Laboratory address which highlights progress over the past year and future directions, dissemination of "level-1" (all hands) e-mails, senior management messages transmitted via the Lab's bi-weekly *Currents* newspaper and in the weekly *Headlines* electronic newsletter, and increasing use of the Laboratory's growing webpage (e.g., to provide security-related reference information). Berkeley Laboratory uses a well-established personnel system, Performance Progress Review, for annual supervisory assessments of individual performance and conveyance of expectations for the coming year.

The leadership of the Laboratory continued to focus greater efforts on community relations aimed at communicating greater awareness of the Laboratory's work, promoting openness and cooperation, and building improved credibility and trust with its community and stakeholders. LBNL's leadership also remains strongly committed to continuous quality improvement and partnering with DOE and other external stakeholders, and effectively utilizes the performance measures in the DOE-UC contract as a mechanism to further these goals. A good indication of the Laboratory's commitment to quality is the internal review of its annual performance self-assessment conducted by the Internal Audit Services Department. This internal quality assurance function, which is executed with UC and DOE participation, brings improved accuracy and credibility to the Laboratory's overall self-assessment.

Results

The annual LBNL Institutional (5-year) Plan serves to communicate top Laboratory goals internally, to DOE, and to outside constituencies. The IP includes a Director's Statement, strategic research objectives and initiatives, key management issues, and much other summary-level information about the Laboratory. Several of these activities were advanced in FY 1999, including:

- Continued multi-disciplinary growth in the scientific productivity of the ALS
- Completion and delivery of key components for the Assymmetric B Factory at SLAC, the Solenoidal Tracker (STAR) detector for RHIC at BNL, and SNO in Ontario, Canada
- Commencement of tera-scale computing with the commissioning of NERSC III
- Opening of the JGI-PSF in Walnut Creek and fulfillment of genome sequencing goals
- Initiation of work in Carbon Science and co-leadership of a new Center for Research on Ocean Carbon Sequestration.

Laboratory management's communications and attention to issues raised in last year's property management assessment resulted in significant improvements in FY 1999. LBNL worked with OAK and the BSO in developing an approach for individual accountability of assigned property, and a new property inventory information system was implemented Laboratory-wide.

LBNL proactively addressed two issues that were priority concerns for DOE in FY 1999: year 2000 (Y2K) readiness and cybersecurity. The Lab's preparations for the Y2K rollover began several years ago, and have been regularly reported to DOE and Lab management. Two DOE on-site reviews were conducted in FY 1999, and a Berkeley Laboratory Y2K Business Continuity Plan was submitted. The Lab has assigned a new Computer Protection Program Manager. It's Network Research Group is recognized for developing innovative cybersecurity software such as BRO to detect and safeguard systems from network intruders without the constraints of firewalls.

The Berkeley Laboratory continued to work closely with OAK and the BSO in implementing ISM throughout the Laboratory, receiving a Phase II (Effectiveness) validation for DOE. Updated Work Smart Standards were developed, incorporated into the environmental compliance program, and added to the prime contract. These partnerships with DOE and LBNL's ISM System are considered models within the DOE complex.

Laboratory officials increased their communications with City of Berkeley officials, the Environmental Protection Agency (EPA) and State regulators, and local community groups on issues related to waste management, National Tritium Labeling Facility (NTLF) tritium emissions, and a Superfund rating sampling plan. While there has been modest progress, the issues involved in each area are still open and continuing into FY 2000. In FY 1999, LBNL contracted for a community

survey, the results of which were used to draft a Community Relations Plan now awaiting the Director's approval.

Performance Rating (Adjectival)**: Outstanding**	95.00%

Performance Measure: 1.1.c Stewardship of Assets

Evaluation of Laboratory management systems for making decisions that address stewardship of programmatic and institutional assets. Assessment will include the impact of planning on decision making, the use of prioritization processes, asset management, resource allocation, etc.

(Weight = 16.6%)

Performance Gradient:

Weighting for Approach/Deployment and Results:
A/D = 40%
R = 60%
Gradients (see table1)

Performance Narrative:

Approach/Deployment
Laboratory assets can be broadly categorized as human resources, facilities, equipment, administrative and operational support systems, and LDRD funding. LBNL employs a straight-forward approach to asset stewardship, delegating responsibility for research program assets (scientific and engineering personnel, LDRD) to the Deputy Director for Research; and for physical and support assets (facilities, equipment, administrative and operations support personnel, institutional systems) to the Deputy Director for Operations. The Director's Action Committee (DAC) is the Laboratory's final planning approval and decision-making group. The DAC annually reviews plans and recommends priorities in the Institutional Plan, for human resources, the level of LDRD, facility and capital resource allocation, and indirect costs (including maintenance budgets). Key annual functions pertaining to the stewardship of assets include: the field budget call and review (including the call for General Plant Projects (GPP) and Multi-program Energy Laboratory – Facility Support (MEL-FS) infrastructure projects), the internal LDRD call, review and allocation process, and the indirect (overhead) budget review.

Given an aging institution and flat DOE funding for infrastructure and "landlord" needs, LBNL leadership is to be commended for continuing to make targeted investments in these areas from indirect funding while also continuing to reduce overhead burdens on the science programs. In FY 1999, for example, these were targeted to painting, roofing, and other needed facility repairs.

Results
Berkeley Laboratory uses a market-based pay policy to attract and retain highly qualified staff. Thus far it has been successful in its focused recruiting efforts on the growing and high-demand areas in the Life Sciences and Computing/Information Sciences. A new Engineering Division Director was recruited following a nationwide search.

LBNL implemented its FY 1999 LDRD program plan consistent with the requirements of DOE Order 413.2, including an administrative concurrence by DOE OAK, and approval by the Office of Laboratory Policy (SC-7) within the HQ Office of Science. LDRD projects are usually at the frontiers of science, competitively peer-reviewed and selected, and build upon Laboratory competencies in support of DOE missions. Recent LDRD projects have made strong contributions to the ALS program, Scientific Computing, Structural Biology, and other areas.

The Berkeley Laboratory continues to make outstanding use of facilities planning documents and information management systems and databases to steward its physical assets and prioritize infrastructure resource investments. These include; a Comprehensive Facilities Plan (20-year, updated every 5 years), a Building Condition Assessment (5-year cycle), a Facilities Maintenance Plan, a Space Needs Assessment Plan, maintenance of the DOE Facilities Inventory Management System (FIMS) database and integrated review and ranking of *all* capital and plant project needs, regardless of funding source, using a Risk-Based Priority Matrix (RPM).

Since space is at a premium on the hilly site, the Laboratory continues to have one of the highest facility occupancy/utilization rates in the DOE laboratory system. Surplus facility space is usually quickly readapted to new needs. There was some incremental progress toward the eventual cleanout and reuse of the Laboratory's Bevalac complex (B.51 and parts of B.71), which comprises ~10 percent of the space on the main site. In late FY 1999, LBNL reached an agreement with DOE OAK's Environment Management (EM) program to 50/50 cost-share, between Laboratory overhead and local EM funding, a ~$160K study to develop a cost-estimate for "Green Decontamination & Decommissioning" (D&D) of the Bevalac complex. Among several options, this would entail, for example, efforts to redeploy remaining shielding blocks elsewhere within the DOE system, thereby avoiding what would otherwise be low-level waste disposal costs. Completion of such a cost study is a pre-requisite for identifying the minimum required D&D costs to prospective funding sponsors.

In the area of personal property stewardship and accountability, the Laboratory instituted significant improvements in FY 1999 including: the movement of property management under the Facilities Department, assignment of property stewardship responsibilities to all Laboratory employees and implementation of Sunflower Assets software to track property and notify Laboratory custodians. The Facilities Department also uses an integrated, multi-functional resource management application named MAXIMO for: central storeroom inventory management, purchasing, work-order request/tracking/cost management, vehicle fleet management, et al. The Laboratory also has a vegetation management program to reduce the risk of wildfires and develop a sustainable landscape.

Performance Rating (Adjectival)**: Outstanding**	95.00%

Performance Measure: 1.1.d Effective Resource Management

Evaluation of management's efforts to effectively manage funding and staff resources consistent with DOE and Laboratory goals. Assessment will focus on performance results which may include improvements in cost effectiveness such as the ratio of S&T to A&O staff, and other productivity or re-engineering indicators. **(Weight = 16.6%)**

Performance Gradient:

Weighting for Approach/Deployment and Results:
A/D = 40%
R = 60%
Performance Gradients (see table1)

Performance Narrative:

Approach/Deployment
The Laboratory Director continues to emphasize efficient resource management in order to maximize the commitment to the Laboratory's science and technology missions. On the Operations side, LBNL continued its proactive investment commitment to utilizing new information technology tools and management information systems that has been a key enabler of the indirect cost reductions over the past several years. The newer systems are not only more streamlined and cost-effective, they allow better cost-projections and identification of savings opportunities. The Laboratory's Deputy Director for Operations provides the DAC with quarterly overhead cost tracking information and an annual overhead budget target. The DAC, with the support of the Controller's Office, sets institutional indirect rates, subject to approval by DOE/OAK.

Management of travel costs became an area of focus in FY 1999, and the Laboratory made a good faith effort to meet its target for DOE-sponsored travel for the year. Internal management communications emphasized the need to minimize travel costs and encourage use of the Laboratory's web-based reservation system to obtain the lowest airfare rates. To aid divisions and line managers, the Laboratory developed a travel report that details travel cost status and trends by division and project. Going into FY 2000, travel cost management will be an even more significant challenge for Laboratory management due to growth in some programs, travel cost inflation, the enduring need to deliver on commitments in numerous collaborations with other institutions across the U.S. and around the world, and stringent, statutorily-mandated travel caps (reduced a further 35 percent from the FY 1999 target level).

Results
LBNL continued a trend that began in the early to mid-1990s of reducing institutional overhead and labor burden rates. In FY 1999, the general and administrative (G&A) rate was reduced by 1.5 percent, the site support rate fell 1.8 percent, and payroll burden was down 1 percent. The Laboratory maintained a research to support staff ratio of 2.3 (MacLachlan metric). Given the number of new policy and directive requirements that DOE has promulgated and continues to place on the Laboratory,

it will be a formidable challenge to maintain this general downward trend in indirect cost rates. If LBNL is able to successfully accomplish this in FY 2000, it would be truly indicative of outstanding performance in effective resource management.

The Laboratory exceeded its FY 1999 (DOE) travel target of $7.7M by a small margin, ending the year with total DOE travel costs of ~$8.0M. However, it must be noted that the final targets for the Laboratory were not established until late in the fiscal year, after the majority of these costs had already been incurred. Berkeley Lab is making greater use of videoconferencing as a substitute for some travel. Three additional videoconferencing rooms were installed, and about 30 videoconferences per day are held throughout the Laboratory.

Performance Rating (Adjectival)**: Outstanding**	95.00%

Performance Measure: 1.1.e Community Relations

Evaluation of management's awareness of public concern regarding Laboratory operations. Assessment will focus on management's effectiveness in addressing community issues in a proactive manner. **(Weight = 16.6%)**

Performance Gradient:

Weighting for Approach/Deployment and Results:
A/D = 40%
R = 60%
Gradients (see table1)

Performance Narrative:

Approach/Deployment
From a community relations standpoint, the Berkeley Laboratory operates in a challenging local environment. Over the past two years, the Laboratory has become more proactive in its community relations efforts, hiring a Community Relations Coordinator in 1997. In FY 1999, LBNL commissioned a survey of the local community's perceptions of the Laboratory and its work, and used this information to draft a Community Relations Plan. The Laboratory responds promptly and factually to erroneous or adverse media reports.

LBNL's Community Relations Office within the Public Information Department has the lead responsibility for administering the Laboratory's community relations program. The Laboratory also has a Community Relations Advisory Group (CRAG), a management advisory body that meets monthly. LBNL's community relations program aims to build the Laboratory's relationship in nearby communities through direct interactions with City of Berkeley officials, community leaders and active community groups, participation in community organizations and events, and by providing for Laboratory tours and public speakers for organizations that want to learn more about LBNL and the science conducted there. The Laboratory also continues to be involved in a number of science education activities, but these appear to be a collection of decentralized projects and initiatives rather than parts of an integrated program of educational outreach.

Results
First Response Aid Agreement with City of Berkeley: The LBNL Director signed a Memorandum of Agreement with City of Berkeley officials in June, 1999 in which the Laboratory agreed to provide for fire protection and emergency services in the community areas immediately adjacent to its site where its proximity allows it to be a "first responder." Laboratory fire fighters will also participate in joint training with City of Berkeley fire fighters.

Tritium issue: In FY 1999 LBNL representatives continued to work proactively with key stakeholders, including members of the Tritium Issues Work Group and with City of Berkeley officials. After the resignation of four community members from the Tritium Issues Work Group (TIWG), the Laboratory restated its commitment to support independent sampling as the best way to resolve questions involving public safety. In May, 1999, to accelerate the collection and analysis of tritium samples, LBNL submitted a draft Tritium Sampling and Analysis Plan for areas at and around Berkeley Laboratory's NTLF to the EPA. The data was requested by the EPA last September to help them make a determination on the Laboratory's eligibility for "Superfund" listing. LBNL media relations acted proactively by giving local media accurate information prior to expected news coverage on the submission of the draft sampling plan. Currently, the Laboratory is establishing an Environmental Sampling Project Task Force in order to provide community stakeholders with the opportunity to review and comment on the required sampling and analysis effort. Efforts of the TIWG are pending completion of the work by the Environmental Sampling Project Task Force.

Case of Alleged Scientific Misconduct: In the case of alleged scientific misconduct by a Laboratory scientist in the mid-1990s conducting research into potential human health impacts from power-line electromagnetic fields (EMF), Laboratory management responded promptly and appropriately. Some aspects of the case are still pending legal and administrative settlement.

Community Survey: In FY 1999, LBNL contracted with a survey research firm to perform a community baseline survey on perceptions of the Laboratory. The survey questionnaire posed 30 questions to 850 telephone survey recipients, the majority living in the Berkeley and Alameda County communities and the balance from Contra Costa County. The results of the survey gave the Community Relations Manager useful information to focus on for future direction. The survey also pointed out that the percentage of community members surveyed that have concerns about the environment is low (only 2-4 percent of the responses).

Draft Community Relations Plan: The Laboratory drafted a Community Relations Plan that is expected to be signed by the Laboratory Director in November 1999. The draft plan outlines LBNL's community relations goals and objectives and defines activity priorities. From the results of the community survey, the draft plan was revised to refine goals and objectives. This plan will be an excellent tool to keep the community relations program more focused and effective.

Tour Program: The Community Relations Office expanded their tour program in FY 1999. It currently has 12 graduate student tour guides who provide tours on a biweekly basis, and specialized tours upon request. LBNL has also placed an ongoing public service announcement in the Sunday San Francisco Examiner-Chronicle entertainment section and will soon begin offering weekly tours. In FY 1999, LBNL Community Relations Office gave 30 tours with over 300 participants.

Improved Web Information: One of the goals in the Draft Community Relations Plan is to promote the Laboratory's achievements and values in the community. Objectives to reach this goal include the use of a diverse set of communication tools to reach out and inform the community about Laboratory activities. The Laboratory continues to improve its web-site as a communication tool, and accomplished the following in FY 1999:

- The Public Information web-site has been improved and designed to invite the public and news media to explore further. A public tritium web-site was also created in FY 1999 as a comprehensive source for information related to tritium operations at the Laboratory. They have also added a feature where anyone can sign up to begin automatically receiving LBNL news releases via email.

- In February, 1999, the Public Information Department introduced a new online publication called *Science Beat*, which highlights major research and other science-related developments at Berkeley Laboratory. In addition to Laboratory employees, the publication targets the news media and the general public to communicate progress in the work the LBNL is doing.

- In March, 1999, LBNL announced their development of the Home Energy Saver (HES) web-site. This excellent web-site allows consumers to enter information about their own homes in order to compute where energy is being wasted and what specific changes would result in energy savings. This web-site received extensive media coverage across the country. A large number of organizations link to the Home Energy Saver from their web sites. These include, consumer-oriented groups, energy utilities, state energy offices, educational institutions, and energy consulting firms.

Performance Rating (Adjectival)**: Excellent**	88.00%

Performance Measure: 1.1.f Accountability and Commitments

Evidence that systems ensure major commitments are met and information on status is timely and complete and that these systems allow informed management action. **(Weight = 16.6%)**

Performance Gradient:

Weighting for Approach/Deployment and Results:
A/D = 40%
R = 60%
Gradients (see table1)

Agreement:

Evaluation to include management's efforts to support implementation of: Integrated Safety Management Implementation, Work Smart Standards, Year 2000 Compliance

Performance Narrative:

Approach/Deployment
LBNL continued its effective system of assigned responsibilities and line management accountability to track major commitments and assure follow-up/implementation. The Deputy Director for Operations and divisions under him are responsible for tracking and follow-up on operational and administrative commitments; and the Deputy Director for Research and the program divisions are responsible for program and project commitments. Both of these groups have standing meetings at which open commitments are routinely reviewed. As appropriate, significant issues from these groups may also enter onto the DAC's agenda and actions tracker.

The Berkeley Laboratory maintains several noteworthy data systems that serve not only to manage its own management commitments, but also support DOE OAK in its oversight role. These include the Laboratory Corrective Action Tracking System (LCATS) for tracking commitments related to ES&H and directives/rules/contract changes, and Internal Audit Services (IAS) Department systems for follow-up actions resulting from audits or Inspector General (IG) reviews.

Results
In FY 1999, DOE renewed its commitment to assuring effective planning and management of major construction projects, which are increasingly executed by multiple DOE laboratories. Since the majority of the external R&D collaborations (mentioned in 1.1.a) are conducted by the Laboratory's General Sciences Divisions, LBNL appointed a Deputy for General Science Projects to oversee the management of both external and internal projects, and better assure the on-time, within budget completion of the Lab's deliverable commitments. The Berkeley Laboratory's responsibility for the Low Energy Ring and major sections of the BaBar Detector for the Asymmetric B Factory at SLAC

were fully completed and delivered on time and within budget in FY99. The same is true for the STAR detector delivered to the RHIC facility at Brookhaven. So far, the Laboratory is also on track to fully meet its commitments for the "front-end" of the SNS project at ORNL and the 2nd axis of DARHT project at LANL, but budget reductions and ongoing reviews of these projects may result in some rebaselining.

The sustained commitment of LBNL's leadership was critical in successfully responding to findings in the 1997 Birgenau Report on U.S. synchrotron light sources. Since then, the number of users at the ALS has tripled, and a number of new, multi-disciplinary scientific opportunities are being pursued, with more expansion planned. The Laboratory's management was also highly successful in its collaboration with LLNL and LANL to establish the JGI-PSF, currently the second largest genome sequencing facility in the U.S. and third largest in the world.

Integrated Safety Management is now institutionalized and implemented throughout the Berkeley Laboratory, with ongoing commitment and involvement from the Director and senior Laboratory management. LBNL has been a leader within the DOE complex on ISM implementation, and in FY 1999 the Laboratory received a Phase II (Effectiveness) validation from DOE/OAK. The Work Smart Standards (WSS) were comprehensively updated in FY 1999 to comply with DOE contractual requirements, and ultimately were added as part of the prime contract.

DOE issued numerous Y2K-related requirements in FY 1999, and held two on-site reviews of LBNL's preparations and readiness. The Laboratory fulfilled all its major Y2K commitments, and also assisted other organizations in their readiness efforts.

LBNL responded prudently and rapidly to a number of new security-related requirements in FY 1999. A Laboratory Security Officer was assigned, and new policies and procedures were developed or improved in conjunction with LBNL's counter-intelligence officer at LLNL for: tracking foreign visitors and assignees to the Laboratory, foreign travel by the Laboratory's (~60) clearance holders, cybersecurity, and export control. The Laboratory established and is continuing to develop a one-stop Security homepage on its webpage to promote awareness, provide reference materials, points-of-contact, and facilitate implementation of its security requirements. During the month of August, a three-part mandatory security awareness training program was conducted at the Laboratory, first for clearance holders, next for managers/supervisors, and finally for the general laboratory staff (via login to its security homepage).

Performance Rating (Adjectival): **Outstanding**	95.00%

The performance expectation for each performance measure will use the scoring criteria indicated in Table 1 below. Each performance measure indicates the relative weights between the Approach/Deployment criteria and the Results criteria.

Table 1, Appraisal Scoring Guidelines for Laboratory Management

Narrative Rating	Score Range	Approach/Deployment	Results
Outstanding	90 - 100%	• a sound systematic approach, fully responsive to all requirements. • a very strong fact-based improvement process is a key management tool; strong refinement and integration - backed by excellent analysis. • approach is fully deployed without significant weaknesses or gaps in any areas or work units.	• current performance is excellent in most areas of importance to the key business requirements. • excellent performance levels in most areas. • strong evidence of industry and benchmark leadership demonstrated in many areas.
Excellent	80-89%	• a sound systematic approach, responsive to the overall purposes. • a fact-based improvement process is a key management tool; clear evidence of refinement and improved integration as a result of improvement cycles and analysis. • approach is well developed, with no major gaps; deployment may vary in some areas or work units.	• Current performance is good to excellent in most areas of importance to the key business requirements. • Most improvement trends and/or current performance levels are sustained. • many to most trends and/or current performance levels show areas of leadership and very good relative performance levels.
Good	70 - 79%	• a sound systematic approach, responsive to the primary requirements. • a fact-based improvement process in place in key areas; more emphasis is placed on improvement than on reaction to problems. • no major gaps in deployment, though some areas or work units may be in the very early stages of deployment.	• improvement trends and/or good performance levels reported for many to most areas of importance to the key business requirements. • no pattern of adverse trends and/or poor performance levels in areas of importance to the key business requirements. • some trends and/or current performance levels show areas of strength and/or good to very good relative performance levels.
Marginal/ Unsatisfactory	50 - 69%	• beginning of a systematic approach to the primary purposes. • early stages of a transition from reacting to problems to a general improvement orientation. • major gaps exist in deployment that would inhibit progress in achieving the primary purposes.	• early stages of developing; some improvements and/or early good performance level in a few areas.

Performance Area: ENVIRONMENTAL RESTORATION and WASTE MANAGEMENT

Performance Objective: #1 Environmental Restoration and Waste Management

The Laboratory will conduct Environmental Management (EM) waste operations in a safe manner that protects human health, the environment and the public and prevents adverse impacts thereon; the Laboratory will develop innovative solutions to advance the Environmental Management Program; and the Laboratory's Environmental Restoration Program will continually strive to improve efficiency and maximize remediation. **(Weight = 100%)**

Criteria: 1.1 Waste Management

The Laboratory's facilities and operations for handling waste will be managed to minimize the impact on the environment and to maximize the efficient use of EM funds. The Laboratory will operate its waste facilities to continually strive to improve efficiency and reduce the waste inventory.

(Weight = 25%)

Performance Measure: 1.1.a Waste Management

The Laboratory will collect data on the volume of waste shipped offsite plus made "road-ready" per total operations dollar costed per fiscal year. This data will be trended to demonstrate improvement in efficiency and compared to an established baseline. **(Weight = 10%)**

Assumptions:

1. The performance period is for a single fiscal year. However, disposal volumes not claimed in the last performance period may be used in the current performance period not to exceed 25% of the performance year EM Commitment.

2. Baseline year will either be the average of actual FY97 and FY98 data, actual FY98 data, or 1.15 of FY98 goals. The FY98 goal is the minimum disposal volume necessary to attain an Outstanding Rating in the FY98 performance period for this measure.

3. Total operations dollar is funding costed at end of fiscal year for operating expense and capital equipment, relegated to Facility Operations and Maintenance (FO&M) activities (i.e., Base Program).

4. Waste volumes shall be limited to those funded and tracked by EM-30.

5. "Road Ready" waste volumes are wastes that have an intended disposal site, are certified to that site's waste acceptance criteria (WAC), and its waste profiles are accepted by that disposal site; but have yet to be shipped due to circumstances beyond the site's control. The waste profile acceptance requirement may be revisited on a case-by-case basis and is not applicable for TRU waste.

6. Waste identified as "road ready" will be considered disposed. Disposal credit for shipped "road ready" waste volumes is not allowed in subsequent performance period(s).

7. Aqueous waste discharged to sewer will be classified as low-level waste (LLW), mixed waste (MW), hazardous waste (HW), and/or "Other Waste" for tracking purposes, as appropriate.

8. Total aqueous waste inventory received is treated and then disposed.

9. Conversion factor of the specific density of water (1.0) will be used to convert the weight of aqueous waste to volumetric measurements.

10. Until the issue of the State of California's jurisdiction on LLW with non-RCRA constituents is resolved, such waste type volumes may be allocated to LLW or MW categories.

11. Toxic Substances Control Act (TSCA) and medical waste volumes will be included with HW inventory.

12. "Other Waste" (e.g., non-hazardous, sewerable) is defined as EM-30 waste not otherwise categorized as LLW, MW, HW, or TRU waste.

13. Due to its non-defense designation, TRU waste at LBNL is excluded as a waste type for the performance measure.

Success Criteria and Waste Type Matrix Elements will be renegotiated to account for any significant programmatic, regulatory, and/or fiscal changes.

Performance Gradient:

The score for this performance measure will be based on the following table:

Success Criteria

Rating	**Range**
Outstanding	90-100%
Excellent	80-89%
Good	60-79%

Marginal/Unsatisfactory <60%

The Success Criteria Gradient is calculated using the following formula:

$$\text{Score} = \frac{\sum \text{Waste Type Matrix Points}}{\text{Total \# of Waste Types}} \text{ -x } 100\%$$

Basis:

The rating of Outstanding or Excellent can be attained only if each element of the summation is greater than or equal to 60%, excluding TRU waste.

Waste Type Matrix Points are assigned from the table below by calculating for each applicable waste type the Performance Improvement (PI) :

$$PI \text{ - } \frac{\text{Baseline Year Factor} - \text{Performance Year Factor}}{\text{Baseline Year Factor}} \text{ x } 100\%$$

Where:

$$\text{Performance Year Factor} = \frac{\text{Total Operations Funding Costed for Performance Year}}{m^3 \text{ Waste Type Disposed}}$$

$$\text{Baseline Year Factor} = \frac{\text{Total Operations Funding Costed for Baseline Year}}{m^3 \text{ Waste Type Disposed}}$$

Waste Type Matrix

Waste Type	PI≤-5%	-5%<PI≤5%	5%< PI≤10%	10%<PI ≤15%	PI>15%
HW	0	1	1	1	1
LLW	0	0.25	0.5	0.75	1
MW	0	0.25	0.5	0.75	1
TRU	0	0.25	0.5	0.75	1
Other	0	1	1	1	1

Performance Narrative:

LBNL has been able to reduce the unit cost per operations dollar for disposal or recycling of each of the waste types. Because of their outstanding record in the waste management program, the efficiency opportunity in this performance measure is at the point of diminishing returns. DOE OAK and LBNL has agreed upon a revision to this measure for FY 2000.

Performance Rating (Adjectival)**: Outstanding**	95.00%

Performance Measure: 1.1.b

The Laboratory will reduce low-level and mixed waste inventories through treatment and disposal activities. Treatment and disposal volumes will be tracked and compared to the EM Management Commitments. **(Weight = 15%)**

Assumptions:

1. The performance period is for a single fiscal year. However, treatment/disposal volumes not claimed in the last performance period may be used in the current performance period not to exceed 25% of the performance year EM Commitment.

2. EM Management Commitments obtained from site-specific Accelerated Cleanup: Paths to Closure document.
3. LBNL: treatment 1 m^3 MW, 7.9 m^3 LLW; disposal 0.3 m^3 MW, 52.1 m^3 LLW.

4. Waste volumes shall be limited to those funded and tracked by EM-30.

5. "Road Ready" waste volumes are wastes that have an intended disposal site, are certified to that site's waste acceptance criteria (WAC), and its waste profiles are accepted by that disposal site; but have yet to be shipped due to circumstances beyond the site's control. The waste profile acceptance requirement may be revisited on a case-by-case basis and is not applicable for TRU waste.

6. Waste identified as "road ready" will be considered disposed. Credit for shipped "road ready" waste volumes is not allowed in subsequent performance period(s).

7. Aqueous waste discharged to sewer will be classified as low-level waste (LLW) and mixed waste (MW) for tracking purposes, as appropriate.

8. Total aqueous waste inventory received is treated and then disposed.

9. Conversion factor of the specific density of water (1.0) will be used to convert the weight of aqueous waste to volumetric measurements.

10. Until the issue of the State of California's jurisdiction on LLW with non-RCRA constituents is resolved, such waste type volumes may be allocated to LLW or MW categories.

Success Criteria and Waste Type Matrix Elements will be renegotiated to account for any significant programmatic, regulatory, and/or fiscal changes.

Performance Gradient:

The score for this performance measure will be based on the following table:

Success Criteria

Rating	Range
Outstanding	>95%
Excellent	90-95 %
Good	78-89%
Marginal/Unsatisfactory	<78%

The Success Criteria Gradient is calculated using the following formula:

$$\text{Score} = \frac{1}{4}\left[\frac{\text{Amount LLW Treated}}{\text{LLW EM Treatment Commitment}} + \frac{\text{Amount MW Treated}}{\text{MW EM Treatment Commitment}} + \frac{\text{Amount LLW Disposed}}{\text{LLW EM Disposal Commitment}} + \frac{\text{Amount MW Disposed}}{\text{MW EM Disposal Commitment}}\right] \times 100\%$$

Basis:

1. Each element of the formula is less than or equal to 1.2. That is, the highest individual treatment/disposal versus treatment/disposal commitment ratio that can be attained is 1.2.

The rating of Outstanding or Excellent can be received only if each element of the formula is greater than or equal to 78%.

Performance Narrative:

LBNL has made use of commercial disposal options, enabling them to maintain sufficient storage capacity for throughput of waste. The Laboratory was able to successfully ship a portion of their mixed waste inventory for a dedicated burn campaign at Idaho National Engineering Laboratory Waste Experimental Reduction Facility to meet their mixed-waste commitments.

Performance Rating (Adjectival): **Outstanding**	98.00%

Criteria: 1.2 EM Program Innovation

The Laboratory will develop innovative solutions to advance the Environmental Management Program. The EM Program includes Environmental Restoration, Waste Management, and Technology Development. **(Weight = 25%)**

Performance Measure: 1.2.a Advancement of the EM Program

The Laboratory will advance the state of the art technologies by implementing their usage; participate in the corporate advancement of the EM Program by providing solutions or assistance to other DOE/OAK sites; and identify and implement innovative technological solutions or business practices that result in savings. **(Weight = 25%)**

Assumptions:

- The performance period will be a single DOE fiscal year.
- It is recognized that actions may result in cost savings that extend for more than one year. Credit for cost savings (Category 3) may be taken in each year in which cost savings are realized, up to a total of five years.
- In general, accomplishments are expected using existing resources. In some cases, additional funding may be required to undertake specific innovative solutions. With the agreement of both parties, DOE-HQ(EM) may provide additional funds and/or allow the Laboratory to use cost savings realized to meet this performance measure.

Performance Gradient:

The degree of innovation achieved will be measured by a point system. Points will be awarded in each of several performance categories, with a total score from all categories being the final score for the performance measure. Projects which receive credit in one performance indicator category may also receive credit for any costs savings realized (Category 3), but may not receive credits in all three categories. The performance indicators and associated award points will be as follows:

Category 1
Advance the state of the art technologies by implementing the usage of Laboratory technologies at DOE or other Government sites, or utilize other EM technologies at the Laboratory.

1a- Use of non-LBNL EM developed technology at LBNL
1 point each technology

1b- Use of LBNL EM developed technology at other government sites

1 point each technology

1c- Use of LBNL EM developed technology at any DOE site
2 points each technology

1d- Non DOE funded use of LBNL EM developed technology at industrial sites
1 point each new project

Category 2
The Laboratory participates in the corporate advancement of the EM program by providing solutions or assistance on projects at other DOE sites. Projects should result in at least one of the following:

2a- Cost savings
2b- Efficiency improvement (i.e., quicker, better quality, etc.)
2c- Liability or risk reduction
2d- Use of laboratory resources and/or facilities to aid others
(1 point will be awarded for each project that meets one or more of the criteria listed.)

Category 3
Provide cost savings by identifying and/or implementing innovative technological solutions or business practices. Innovative technological solutions or business practices are defined as those that represent a significant change from current solutions or existing practices (technological or regulatory). They can not simply be refinements of existing technological or business practices, nor be cost savings due to a simple reduction in scope of work or deliverables.

- LBNL will be awarded 1 point for every $100,000 saved, but no more than 3 points per technology

- LBNL will be awarded 1 point for incorporation of innovative technologies into a Program Baseline System (PBS) with adjusted baseline

Rating	Range (LBNL)
Outstanding	≥9
Excellent	>6 - 8
Good	3 - 5
Marginal/Unsatisfactory	0 - 2

Performance Narrative:

The rating for this performance measure is **outstanding**. LBNL earned most of their points from efforts of one Principal Investigator and the cost savings from the deployment of two technologies. LBNL should be recognized for initiating contact to assist with the deployment of their Viscous Liquid Barrier technology at Brookhaven National Laboratory. They modeled the placement of the barrier to optimize its construction, and determine how it will perform if built as modeled. LBNL Environmental Restoration does continue to look for ways to improve their remediation effort by incorporating new technologies such as enhanced bioremediation and dual phase soil vapor extraction. Basis for the DOE OAK's validation was participation in the semiannual reviews with the Laboratory.

Performance Rating (Adjectival)**: Outstanding**	95.00%

Performance Criteria: 1.3 Environmental Restoration

The Laboratory will target the number of potential release sites (Solid Waste Management Units and Areas of Concern) that are planned to be completed in the next FY based on budget for the next FY. **(Weight - 25%)**

Performance Measure: 1.3.a Environmental Restoration

This measure will track the number of potential release sites completed in the next FY and compare this number against expected completion levels. **(Weight - 25%)**

Assumptions:

1. Potential release sites are considered completed when the lead RCRA regulator approves "No Further Investigation (NFI)" or "No Further Action (NFA)" for the site.

2. Representatives from LBNL and DOE have reviewed the difficulty of completing assessment of active units and divided them into three groups. The first group are those for which the chances of completing assessment and receiving NFA/NFI status from regulatory agencies are high (H). (A total of 6 units fit into this group.) The second group are those that the chances for their assessment completion is very difficult but not impossible (M). (A total of 11 units are in this group.) The third group are those units for which assessment completion will continue beyond FY-99 (L). (A total of 3 units are in this group.)

3. Rating criteria will be developed, based on their difficulty to complete.

4. The main effort of LBNL Environmental Restoration Program (ERP) during FY-99 is concentrated on the study of corrective measures of active SWMUs and AOCs. It is currently anticipated that the majority of sites which can be completed in a short time frame will have been completed by the end of FY98. It is assumed that a pool of 20 sites will remain after FY98 that have not been previously proposed to lead RCRA regulator for either "No Further Investigation (NFI)" or "No Further Action (NFA)" status.

5. Non receipt of the President's Target Level Funding or funding rescissions will require special considerations.

Performance Gradient:

Maximize number of units completed.

Rating:

Rating	Number of Units accepted for NFA/NFI
Outstanding	greater than 8
Excellent	7 to 8
Good	5 to 6
Marginal/Unsatisfactory	less than 5

Performance Narrative:

The measure is tracked by comparison of the number of release sites completed as compared to the number of expected completions.

Seven release sites were approved for No Further Action/No Further Investigation in FY 1999. Five of the seven sites were approved for No Further Action.

Performance Rating (Adjectival): **Excellent**	85.00%

Criteria: 1.4 Cost and Schedule Variances

The Laboratory's Environmental Management (EM) Program will be managed to improve project/program performance. The Laboratory measures its performance of projects/programs against schedule and cost baselines. **(Weight = 25%)**

Performance Measure: 1.4.a

The cost measure will track the Laboratory's performance in executing EM-funded Environmental projects in accordance with an approved project cost baseline. The schedule measure will track the Laboratory's performance in executing Environmental projects in accordance with an approved overall schedule. **(Weight = 12.5%)**

Assumptions

- Cumulative percent cost variance (%CV) and cumulative percent schedule variance (%SV) will be obtained from the September Project Tracking System (PTS). The Cumulative CV and SV values will be for the fiscal year being evaluated.

1. Baseline change proposals are reviewed and, if determined to be acceptable, approved by DOE/OAK within 30 days of receipt.
2. If the MARS Report contains an accounting error, CV and SV values provided by LBNL and verified by the respective DOE Site Representative may be used.
3. In FY99, only the Environmental Restoration project at LBNL will be tracked under this performance measure.
4. Includes the following DOE-HQ(EM)-funded activities by Project No.
5. LBNL: To be determined.

Performance Gradient:

Gradient Rating	Range for LBNL:
Outstanding	(CV+SV) > 5 %
Excellent	0% < (CV+SV) ≤ 5%
Good	-5% < (CV+SV)< 0%
Marginal/Unsatisfactory	(CV + SV) ≤ -5%

(A) Cost The cost measure will track the laboratory's performance in executing projects in accordance with an approved project cost baseline.

$$\% \text{ CV} = \frac{(\text{Annual BCWP} - \text{Annual ACWP}) \times 100}{\text{Annual BCWP}}$$

Given:
CV = Cost Variance
BCWP = Budgeted Cost of Work Performed
ACWP = Actual Cost of Work Performed

(B) Schedule. The schedule measure will track the Laboratory's performance in executing projects in accordance with an approved overall schedule.

$$\% \text{ SV} = \frac{(\text{Annual BCWP} - \text{Annual BCWS}) \times 100}{\text{Annual BCWS}}$$

Given:
SV = Schedule Variance
BCWS = Budgeted Cost of Work Scheduled
BCWP = Budgeted Cost of Work Performed

Performance Narrative:

Upon review of the Project Tracking System report for the end of the fiscal year (September 1999) the total Cost Variance was $296,000 and the Budgeted Cost Work Performed was $3,469,000 and Actual Cost Work Performed was $3,173,000, therefore the Cost Variance is 9 percent and the total Schedule Variance was ($31,000), and therefore the Schedule Variance is approximately minus 1 percent. The combined variance is 8 percent.

Performance Rating (Adjectival): **Outstanding**	92.00%

Performance Measure: 1.4.b

The cost measure will track the Laboratory's performance in executing Level of Effort activities in accordance with an approved project cost baseline. **(Weight = 12.5%)**

Assumptions:

- Cumulative percent cost variance (%CV) will be obtained from the September Project Tracking System (PTS). The Cumulative CV value will be for the fiscal year being evaluated.

1. If the MARS Report contains an accounting error, CV values provided by LBNL and verified by the respective DOE Site Representative may be used.

2. Baseline change proposals are reviewed and, if determined to be acceptable, approved by DOE/OAK within 30 days of receipt.

3. Includes the following DOE-HQ(EM)-funded activities by Project Baseline Summary (PBS): OK-015, OK-016.

Gradient:

Gradient Rating	Range for LBNL:
Outstanding	$0\% \leq CV \leq 2\%$
Excellent	$2\% < CV \leq 5\%$
Good	$5\% < CV \leq 8\%$
Marginal/Unsatisfactory	$CV > 8\%$ or $CV < 0\%$

(A) Cost The cost measure will track the laboratory's performance in executing projects in accordance with an approved project cost baseline.

$$\%\ CV = \frac{(\text{Annual BCWP} - \text{Annual ACWP}) \times 100}{\text{Annual BCWP}}$$

Given:
CV = Cost Variance
BCWP = Budgeted Cost of Work Performed
ACWP = Actual Cost of Work Performed

Performance Narrative:

LBNL Waste Management has managed their program in a fiscally responsible manner. During the year, the LBNL budget was uncertain and the Laboratory worked with DOE OAK to revisit this

measure to determine the appropriate criteria and cost measures. LBNL worked closely with DOE OAK to reduce uncosted funds.

Performance Rating (Adjectival)**: Excellent**	89.00%

Performance Area: ENVIRONMENT, SAFETY and HEALTH

Preamble: The Laboratory's goal is to accomplish its mission cost-effectively while striving for an injury-free workplace, minimizing waste streams and adverse impacts to the public and environment from its operations. The following Performance Objective, Criteria and Measures are linked to the Guiding Principles and Key Functions of Integrated Safety Management. They include process-oriented measures that are intended to assess key elements of the Laboratory's integrated safety management system. They also include total system outcome measures, which are intended to be key indicators of the performance of the Laboratory's integrated safety management system as a whole.

Objective: #1 Do Work Safely
The Laboratory systematically integrates ES&H into management and work practice at all levels so those missions are accomplished while protecting the worker, the public and the environment.
(Weight = 40%)

Performance Measure: 1

Berkeley Lab uses the four criteria to develop and improve processes to maintain or improve excellence in protecting the worker, the public, and the environment from all ES&H hazards arising from Lab operations and research activities. Berkeley Lab also uses the four criteria to develop and improve processes that maintain and enhance performance in waste minimization and pollution prevention associated with Lab operations and research activities.

The ES&H disciplines work together in an integrated manner to help prevent injury and illness and protect the environment. This integrated approach is extended into Line Management functions such that safety hazard prevention and protection is seamless throughout the Lab.

All ES&H concerns will be managed to assure that all applicable regulatory limits are not exceeded, unplanned releases are minimized, and regulatory standards of operation are followed. Unplanned exposures to chemical and physical hazards and to radioactive material are minimized. ORPS reportable occurrences of skin or personal clothing contamination are also minimized. Radioactive material is managed so that it does not leave controlled areas in an uncontrolled fashion.

The system for managing worker safety, radiation protection, environmental protection, waste minimization, and pollution prevention concerns will define protection activities for establishing organizational goals and policies, developing strategies for achievement, allocating resources for carrying out those strategies, providing structure and delineating roles, responsibilities, authorities, and accountabilities for accomplishing tasks, providing initiating mechanisms to produce the work effort, measuring, evaluating, and correcting/improving performance.

Worker, public, and environmental protection processes are linked to select system outcomes; outcome information is used in ensuring worker safety from all hazards arising from Lab operations and research activities.

Assumptions:

A1 The performance period for this measure is July 1, 1998 to June 30, 1999.

A2 Unless otherwise specified, the term "ES&H" shall represent prevention and protection in all of the following disciplines: radiation protection, worker safety, and environmental protection. This performance measure encompasses the areas of ES&H; e.g., health physics, industrial safety, industrial hygiene, occupational medicine, emergency management, natural phenomena, fire prevention, and environmental protection which encompasses waste management, pollution prevention, as well as environmental protection.

A3 By December 31, 1998, the Laboratory and the DOE will agree to select work packages to sample ES&H processes for mature R&D experiments, infrastructure projects, and institutional equipment and instrumentation maintenance. The work packages will be selected from the radiation protection areas, from occupational safety and health, medical services, emergency preparedness, natural phenomena and fire protection areas, and from environment protection, waste minimization and pollution prevention areas to evaluate the effectiveness of ISM implementation at the Lab.

A4 The severity of events is to be considered in the evaluation. Higher severity events include (but are not limited to): imminent danger situations (as defined by the Occupational Safety and Health Administration (OSHA), worker exposures above OSHA Permissible Exposure Limits, biological exposures above the OSHA medical removal levels, and substantial property damage or personal injury to fire. For radiation, work where there is a lesser radiological hazard, is authorized under either a Radiological Work Authorization category 1 or 2; or Sealed Source Authorization 1 or 2. In general, work, where there is a significant radiological hazard, is authorized under either a Radiological Work Authorization category 3; or Sealed Source Authorization 3, or a Radiological Work Permit, X-ray safety document or Accelerator Safety document. Performance will consider all aspects of the program that enhance and promote program objectives and overall compliance.

A5 Peer reviews, existing procedures, implementing memoranda, Lab tracking system data and other work process products shall serve as demonstrable evidence in contribution to satisfaction of measure gradients. It is not the intention of this measure to foster the generation of supportive or demonstrable documents other than those needed or are necessary to perform the work.

A6 Subcontractor operations/personnel are included in any corrective actions if the subcontractor is performing part of the Laboratory's operations. Subcontractor statistics are gathered separately for those subcontractors that report their hours to the Laboratory. Subcontractors are excluded from LBNL OSHA and CAIRS reporting if they are "servicing" the Laboratory (e.g., copy machine vendors or other transient workers).

A7 The intent of the process measure is to drive the Lab ES&H programs toward improvement of Berkeley Lab's Integrated Safety Management System. Its gradients are deliberately linked to the 4 criteria (these in turn embody all the ISMS principals and core work functions). It is recognized that success is measured on a sliding subjective scale and that satisfaction of a level of excellence does not necessarily mean that all gradients are completely met. Overall Performance is based upon the effectiveness of the integrated safety program as measured in many ways including evaluation of many factors including but not limited to the gradients listed below.

Gradient:

Good:

G1 The Lab shall provide evidence that outcome and processes are linked and effective. The Lab shall demonstrate that all four criteria (i.e., Integrated Safety Management System principles and five core work functions), have been used and addressed in processes aimed at protecting the worker, public, and environment.

G2 The Laboratory uses outcome results to drive improvement in programs where additional improvement is technically possible, or to maintain the current level of excellence in programs where further improvement is not cost-effective.

- There is appropriate and documented follow-up or response to injuries and illnesses, and exposures above the appropriate and applicable nationally recognized standard (such as radiation worker limits, OSHA PEL and ACGIH TLV).
- The Laboratory has identified areas for injury reduction and is applying appropriate resources and attention to accident prevention in those areas.

G3 The Lab provides evidence that the subcontractor work force (as defined in the assumptions) is included in ES&H prevention and protection programs.

Note: For Gradients G4 through G9 below, the rating of Excellent or Outstanding is determined by the number of gradients achieved from this group.

Excellent:

All of the grades for Good are met and five of the following six ISM-based criteria (G4-G9) are met as judged by Berkeley Lab and DOE staff, and G10 is met.

G4 There is documented evidence that Lab management defines the scope of work for all activities where there are significant workplace safety hazards and/or environmental concerns.

- There is documented evidence that management defines the scope of work for at least 90% of work activities where there are lesser workplace radiological hazards and 100% activities where there are significant workplace radiological hazards.

G5 The Lab provides documented evidence that there is line management responsibility for protection of the worker and that resources are effectively allocated (in balance with programmatic, operational and ES&H considerations) for all work activities where there are radiological and/or significant safety hazards and/or environmental concerns (this would be defined by the need for activity authorizations such as regulatory agency permits, AHDs, RWAs, RWPs, SSAs or division and safety program level authorization).

- The Lab provides documented evidence that there is line management responsibility for protection of the public and worker and that resources are effectively allocated (in balance with programmatic, operational and ES&H considerations) for at least 90% of work activities where there are lesser radiological hazards and 100% where there are significant radiological hazards.
- Individuals throughout the organization recognize the environmental aspects of their job responsibilities and take responsibility for protecting the environment, minimizing waste and preventing pollution. Top management demonstrates its commitment to environmental protection, waste minimization and pollution prevention through personnel and managerial actions.

G6 The Lab provides documented evidence that there is a process for regular periodic review and assessment of hazards and that all radiological and/or significant or major safety hazards and/or

environmental concerns are analyzed and that appropriate (i.e. tailored to the operation) administrative and engineering controls have been developed and implemented, while ensuring that the Lab mission continues to be met cost effectively. This process includes documented evidence of emergency response planning and property protection.

- The Lab provides documented evidence that at least 90% of the lesser radiological hazards have been identified and 100% of the significant or major radiological hazards are analyzed and that appropriate (i.e. tailored to the operation) administrative and engineering controls have been developed and implemented.
- The Lab provides documented evidence that an effective process exists for the elimination of workplace hazards, while ensuring that the lab mission continues to be met cost-effectively.
- Formal programs are in place and kept up-to-date for the proper identification, management and control of hazardous materials and wastes to prevent or minimize their release into the environment.
- Environmental risks are assessed and used to select the appropriate level of control to prevent or mitigate releases to the environment.
- Source operating requirements are established and communicated to source operators.
- The Laboratory has in place a system to evaluate new projects and activities for previously unidentified hazards, new waste generation streams and pollution prevention opportunities.

G7 The Lab provides documented evidence that for all of the work activities where there are identified significant workplace ES&H hazards and/or environmental concerns, conditions and requirements for safe operation are identified, and work is conducted in accordance with these conditions and requirements.

- The Lab provides documented evidence that for at least 90% of work activities where there are lesser radiological hazards (not likely to cause significant harm to the public or worker) and 100% of the work activities where there are identified significant radiological workplace hazards, conditions and requirements for safe operation, are identified, and work is conducted in accordance with these conditions and requirements.

G8 The Lab provides documented evidence that all personnel working where there are significant workplace safety hazards and/or environmental concerns, possess sufficient knowledge and skills to execute their duties safely.

- The Lab provides documented evidence that at least 90% of all personnel working where there are lesser radiological workplace hazards and 100% of the applicable personnel working where there are significant workplace radiological hazards, possess sufficient knowledge and skills to execute their duties safely and with due regard for the radiological safety of the public.
- Environmental protection, waste minimization and pollution prevention roles and responsibilities are well defined, clearly communicated, applicable to the work being performed and understood by all personnel whose activities may impact environmental performance.
- Environmental protection training needs are identified for all applicable Lab staff and tracked effectively.

G9 The Lab provides documented evidence that continuous improvement in worker safety is implemented through self assessment, corrective actions, lessons learned and collaboration and peer review, for all of the work activities where there are significant safety hazards and/or environmental concerns. This expectation includes external programmatic peer reviews and the Tri-Lab Peer Review of Field Safety Program and Occupational Medicine.

- The Lab provides documented evidence that continuous improvement in public and worker radiological safety is implemented through self assessment, corrective actions, lessons learned, and collaboration and peer review, safety for at least 90% of the workplace areas where there are lesser radiological hazards and 100% of the work activities where there are significant radiological hazards.
- Formal programs are in place and kept up-to-date to effectively evaluate environmental protection, waste minimization and pollution prevention activities and communicate concerns and accomplishments within the Lab and to DOE.

G10 The Lab and the local DOE office shall agree on a set of performance indicators for best in class benchmarking. The Lab shall compare current performance with best in class benchmark data and if necessary develop a strategy to meet best in class benchmark data.

Outstanding:
All the grades for Good are met and all six ISM-based criteria (G4-G9) above are met as judged by Berkeley Lab and DOE staff, and G11 through G14 are met.

G11 The Lab shall use best in class benchmark data in implementing strategies, if necessary, that move the Lab's performance toward best in class benchmark levels. An Outstanding gradient is achieved when the Labs performance meets or exceeds best in class benchmark level.
G12 Some of the Laboratory's pollution prevention projects address the transuranic, low level, and/or low level mixed waste streams, as applicable, that are costly and difficult to manage.
G13 The Lab demonstrates that there is optimal two way communication between occupational medicine and all other applicable ES&H disciplines.
G14 The safety record of subcontractor companies is evaluated and considered in contracting.

Criteria: 1.1 Management Defines the Scope of Work Such That (ISM Core Function #1)

- Line management is responsible for the protection of the public, the workers, and the environment (ISM Principle #1).
- Clear and unambiguous lines of authority and responsibility for ensuring ES&H are established and maintained at all organizational levels within the Department and its contractors (ISM Principle #2).
- Resources are effectively allocated to balance programmatic, operational, and ES&H considerations. Protecting the public, the workers, and the environment is a priority whenever activities are planned and performed (ISM Principle #4). **(Weight = 10%)**

Performance Narrative:

The Laboratory has a well documented process for defining the scope of work. Work authorization processes exist, such as Radiation Work Authorization, Radiation Work Permits and Sealed Source Authorization. Hazard identification, safety analysis and Activity Hazards Documents are used to control and mitigate the hazards. The policies and processes are effective integral parts of the

Laboratory's ISM Program, and assures work is performed safely. The program consists of ongoing assessments of the workplace environment by line management and ES&H staff to identify hazardous situations and to take the necessary corrective actions as needed. These processes are applied to all work performed at the Laboratory by laboratory employees and subcontractors, indicating that laboratory work performance is linked to the ISM process. These efforts demonstrate senior management commitment to allocating the necessary resources for a safe work place. No unplanned Occurrence Reporting and Processing System (ORPS) reportable radiation exposures, or personal contamination incidents during the performance period occurred. Worker radiation exposures continue to be well below 1 percent of the Federal limits. Radiation exposure to the public and radioactive releases was maintained at the excellent level. Control of radioactive material outside of controlled areas was good. Significant progress has been made on the inventory of legacy radioactive materials, but work still remains to be done.

There have been no imminent danger safety situations. Since there was an increase in both the lost workday cases and the total recordable cases regarding accident and injury statistics, the Laboratory did not achieve its Best in Class Benchmark goal.

The Laboratory is doing an outstanding job in meeting the DOE Year 2000 Pollution Prevention goals. It is outstanding that there have been only three chemical exposure cases above the applicable occupational exposure and medical removal levels during the performance period.

The Laboratory was required to use best in class benchmark data in implementing strategies, that move the Laboratory's performance toward best in class benchmark levels. Benchmarking strategies were used in the area of accident prevention, but the best in class benchmark levels were not obtained. Agreement was reached between DOE and the Laboratory for Best in Class Benchmark data for the environmental program, but no implementation strategies have been applied. No agreement was reached between DOE and the Laboratory for Best in Class Benchmark data for the radiation safety program.

A review of the safety record of subcontractor companies is included in the selection progress. There were 2 off-normal occurrences during the performance period involving subcontractors.

Performance Rating (Adjectival)**: Outstanding**	95.00%

Criteria	1.2	Protection & Prevention Involves Analyzing the Hazards and Developing and Implementing Controls Such That (ISM Core Work Functions #2 and #3):

- Assurance that the workers, the public and the environment are protected from adverse consequences Laboratory administrative and engineering controls are established to provide adequate (ISM Principle #5).
- The controls to prevent and mitigate hazards are tailored to the hazards and the work being performed (ISM Principle #6). **(Weight = 10%)**

Performance Narrative:

The necessary work authorizations, activity hazards assessment and permit requirements are determined and reviewed on an annual basis by ES&H, and Laboratory line management. The Integrated Functional Assessments (IFA) conducted by ES&H indicates that these processes are followed and that the controls specified are in place. Line management plays a critical role in the hazard analysis process, and establishes the controls and administrative procedures for safe operations where there is no formal authorization provided by ES&H. All of the Divisional self-assessments have been completed for the performance period and indicate that line management is performing the required walk throughs. Efforts to complete corrective actions necessary to eliminate hazards, found during these walk throughs, have been good. All serious hazards identified are corrected immediately and 84 percent of the other hazards are corrected within 90 days.

Through an approved set of Work Smart Standards (WSS), the necessary safety requirements are identified and implemented to assure a safe work place. The WSS Set was reviewed, and updated this year. There were no new hazards identified during the review. The updated Set reflects changes in applicable standards, and inclusion of new standards which better addresses the work performed at the Laboratory.

An external OSHA Pilot demonstrated that there are no serious hazards being overlooked. The less significant hazards identified during the inspection were tracked and are being corrected.

Performance Rating (Adjectival)**: Outstanding**	95.00%

Criteria	1.3	Operational Requirements Guiding the Performance of Work Are Such That (ISM Core Work Function #4):

- Personnel possess the experience, knowledge, skills, and abilities to discharge their responsibilities (ISM Principle #3).
- The conditions and requirements for operations to be initiated and conducted are established (ISM Principle #7) . **(Weight = 10%)**

Performance Narrative:

This criterion required the Laboratory to provide documented evidence that Laboratory personnel possess sufficient knowledge and skills to execute their duties safely; that training requirements are identified, that training received is tracked and documented, and that training requirements must be completed prior to work authorization.

Resultant from the FY1999 DOE Radiation Safety Training Program Audit and last year's validation of LBNL's ISM Program, training was identified as an area of improvement. Although most of the audit findings have been addressed, not all have been fully implemented. Specifically, additional effort is needed to completely develop criteria for instructor selection/qualification for Radiation Safety Training.

The Laboratory made significant improvements to their ES&H Training Program. They have allocated resources for a full-time EH&S Training Manager who is committed to continuous improvements to the training program. The Laboratory redesigned and tailored the Job Hazards Questionnaire (JHQ) to meet divisional needs, expanded the options for meeting training requirements, and significantly improved the accessibility and accuracy of training completion data in the database. Other enhancements include the design and implementation of the EH&S Training Reports WebSite which allows users to enter a JHQ, check a training profile, and run training status reports on-line. Web broadcast capabilities for several training courses were made available during this performance period. Overall, the training completion statistics have significantly improved during the performance period.

Divisional self assessments indicate that at least 90 percent of personnel working where there are lesser radiological workplace hazards and 100 percent of personnel working where there are significant workplace radiological hazards possess sufficient knowledge and skills to execute their duties safely. However, statistics for overall ES&H required training is lower, averaging 85 percent. It is recognized that due to the dynamic nature of the Laboratory population and other variants, this percentage is conservative. However, to fully implement ISM, it is important that the Laboratory continue in their efforts to ensure that all required ES&H training courses, not just those associated with radiological hazards, be completed at a higher percentage.

DOE commends the Laboratory for the tremendous progress that was made during this performance period. Based on ongoing interactions with the Laboratory, there is a good indication that this trend of improved performance will continue.

Performance Rating (Adjectival)**: Excellent**	87.00%

Criteria	1.4	Continuous Improvement to Achieve Excellence in ES&H is Accomplished Through (ISM Core Work Function #5)

1. Approaches to ES&H management that are part of the total activity continuous improvement process, e.g.: (1) Self assessment, (2) Lessons learned, (3) Collaboration and peer review, (4) Benchmarking key outcomes and processes to "Best in Class", (5) Improved understanding between DOE and the Laboratory. **(Weight = 10%)**

Performance Narrative:

LBNL's self-assessment program is comprised of three components: the division self-assessments (SA), the Integrated Functional Appraisals (IFA), and the Safety Review Committee (SRC) Management of Environment, Safety and Health (MESH) reviews. DOE personnel performed operational awareness by attending Office of Assessment and Assurance (OAA) meetings, participation in Division SA validation reviews, and participation in IFAs. Deficiencies identified by all components of the Laboratory's SA were tracked and completed according to the priority assigned to the deficiency. Most divisions use the Laboratory SA Deficiency (LSAD) system or the Laboratory Corrective action task (LSAT) system to track corrective actions. LBNL's completion rate for corrective actions for the performance period is 84 percent this year.

All division self-assessments were completed in FY 1999. The quality and thoroughness of the division SA reports improved this year, as a result of the ongoing efforts of the Laboratory, the divisions, and OAA. Division performance and their documentation of performance have improved. One area of notable improvement has been the training completion rate and the record keeping associated with tracking training completion rates. OAA has maintained an ongoing effort to refine and improve the SA process to make it more useful. These efforts have been coordinated with the divisions.

Six IFAs were scheduled in FY 1999, and six were conducted. DOE participated in these IFAs and found them to be thorough and useful. LBNL followed through on deficiencies discovered during the IFAs.

LBNL completed two of the three SRC MESH reviews planned for FY 1999. MESH reviews continue to be an area for improvement, but LBNL has significantly improved their performance in this area from previous years. LBNL continues to examine the MESH process in an effort to improve its value to the Laboratory. LBNL guidance calls for each division to receive a MESH reviews once every three years. LBNL reduced the number planned for this year in order to have more time to make improvements to the MESH process.

In addition to the internal processes the Lab is also reviewed by outside regulatory agencies. During the FY, the Laboratory participated in an Occupational Safety & Health Agency (OSHA) pilot audit. This audit did discover minor deficiencies that LBNL had not found via its internal processes. LBNL moved quickly to correct the deficiencies. Inspections by environmental regulatory agencies also uncovered some violations as discussed under Performance Measure 1.5.h. LBNL moved quickly to correct these problems. It should be noted that the chromium releases were significant incidents that required much time and resources to investigate and correct.

Performance Rating (Adjectival)**: Outstanding**	92.00%

Criteria: 1.5 System Outcome Measures

System outcome measures are linked to the process measures. System outcomes are used to drive process excellence. **(Weight = 60%)**

Performance Measure: 1.5.a Routine Exposures from Routine Activities

Occupational radiation doses to individuals (excluding accidental exposures) from DOE operations will be managed to assure that applicable 10 CFR 835 limits are not exceeded. **(Weight = 5%)**

Assumptions:

- For FY99 the performance period is July 1, 1998 through June 30, 1999.
- A dose reporting level will be agreed upon between the Lab and the DOE by December 31, 1998.
- Any actual or anticipated significant changes in workloads or badged worker population (interpreted to be an increase or decrease of 5% or more) that would affect radiation doses will be brought to the attention of UC and DOE and appropriate adjustments will be made.
- Some variability is expected which may not be indicative of a trend.
- This measure is directed toward current management and control of radioactive materials.

Gradient:

Good: No individual exposures in excess of 500 millirem without an (unless specifically authorized in writing and approved by the Lab Deputy Director of Operations) increase in workload.

Excellent: Qualify for good, plus the number of individual exposures exceeding 100 millirem is less than or equal to the control level of 10, without an increase in workload.

Outstanding: Qualify for excellent, plus the total number of individual exposures (measurable over agreed reporting level) is less than or equal to the three year running average, without an increase in workload.

Performance Narrative:

Significant reduction in radiation exposure to the worker was achieved during the performance period. The number of positive exposures was reduced from 87 in FY 1998 to 59 in FY 1999. This is well

below the three year running average of 88. No individual exposure was in excess of 500 millirem, and only three workers received exposures above 100 millirem.

Performance Rating (Adjectival)**: Outstanding**	95.00%

Performance Measure: 1.5.b Radiation Protection of the Public and the Environment

Public radiation doses to the maximally exposed individual (member of the public) and radiological emissions to the environment, from all Lab operations, will be managed to assure that all applicable regulatory limits are not exceeded. **(Weight = 5%)**

Assumptions:

- For FY99 the performance period is January 1, 1998 through December 31, 1998.
- Any actual or anticipated significant change in workloads (interpreted to be an increase or decrease of 10% or more) that would affect radiation doses or radiological emissions will be brought to the attention of UC and DOE and appropriate adjustments will be made.
- Each Laboratory will define any change in its site control level for the maximally exposed individual dose in coordination with its local DOE office by October 1 for use during the following year.
- Expectations cited for "Excellent" are consistent with ALARA goals.

Gradient:

Good:

- Radiation doses to the maximally exposed individual (member of the public) is greater than 4% and less than or equal to 10% of applicable regulatory limits. Radiological emissions to the environment are greater than 10% and less or equal to 20% of applicable regulatory limits.

Excellent:

- Radiation doses to the maximally exposed individual (member of the public) is less than or equal to 4% of applicable regulatory limits.
- Radiological emission to the environment are less than or equal to 10% of applicable regulatory limits.

Outstanding:

- Radiation doses to the maximally exposed individual (member of the public) is less than or equal to 1 % of applicable regulatory limits.
- Radiological emissions to the environment are less than or equal to 1% of applicable regulatory limits.

Performance Narrative:

For FY 1999, cumulative radiation dose to the maximally exposed individual (MEI) for the performance period (CY 1998) of 0.75 millirem was less than 1 percent of the applicable regulatory limit of 100 millirem/yr. This falls within the "outstanding" gradient criteria. For FY 1999, the dose to the MEI from cumulative radiological emissions to the environment during CY 1998 for air and sanitary sewer were each less than 10 percent of the applicable regulatory limit. These doses each meet the "excellent" gradient criteria. Together, these results suggest an overall score in the mid-range of the **excellent** category, or 85.0 percent, as appropriate.

Performance Rating (Adjectival)**: Excellent**	85.00%

Performance Measure: 1.5.c Prevention of Unplanned Radiation Exposures

Unplanned radiation exposures and ORPS reportable occurrences of skin or personal clothing contamination are managed and minimized. **(Weight = 5%)**

Assumptions:

- For FY99 the performance period is January 1, 1998 through December 31, 1998.
- The severity of the events is to be considered in the evaluation. The weight for unplanned radiation doses of greater than 100 mrem is one (weighting factor=1); if the ORPS event is classified as an Unusual Occurrence, the weighting factor is increased by a factor of 1.5.
- Some variability is expected which may not be indicative of a trend.
- The Number of Individuals contaminated are counted.
- The ALARA goal is to have no Unusual Occurrences.

Gradient:

Good:
- The weighted number of contaminated individuals will be maintained equal to the ALARA goal of 8 per year.

Excellent:
- The weighted number of contaminated individuals is less than the ALARA goal (currently this number is 8) for this measure set by the Berkeley Lab Radiation Safety Committee and agreed upon by Berkeley Lab and the local DOE office.

Outstanding:
- The weighted number of contaminated individuals is less than or equal to 4.

Performance Narrative:

There were no unplanned radiation exposures or ORPS reportable occurences of skin or personal clothing contamination for the performance period.

Performance Rating (Adjectival)**: Outstanding** 98.00%

Performance Measure: 1.5.d Control of Radioactive Material

Radioactive material, including radioactive sources and contaminated articles, is not found outside of controlled areas. **(Weight = 5%)**

Assumptions:

- For FY99 the performance period is July 1, 1998 through June 31, 1999**.**
- Off-normal occurrences have a weighting factor of 1 and unusual occurrences have a weighting factor of 1.5.
- Some variability is expected which may not be indicative of a trend.

This measure is directed toward current management and control of radioactive materials.

Gradient:

Good:
- The weighted number of occurrences will be maintained to within 1 unit of the 3 year running average or equal to the ALARA goal.

Excellent:
- The weighted number of occurrences is less than the ALARA goal of 4 occurences for this measure set by the Berkeley Lab Radiation Safety Committee and agreed upon by Berkeley Lab and the local DOE office.

Outstanding:
- The weighted number of occurrences is less than or equal to 2.

Performance Narrative:

There were four reportable occurrences during the performance period which involved radioactive material outside of a controlled area.

The Laboratory counted three off-normal occurrences and did not count one of the off-normal occurrences as a problem of radioactive material outside a controlled area.. Report OAK--LBL-EHS-1999-0001 involved an empty contaminated shipping container which was moved offsite before it was determined that contamination was present. DOE determined that this occurrence should be included since the vehicle the contaminated container was transported in does not meet the Laboratory definition of controlled area, and the labeling requirements for radioactive materials were not used.

These four off- normal occurrences indicate that the number of occurrences is at the ALARA (As Low As Reasonably Achievable) agreed level and therefore the performance for this measure is rated as **good**.

Performance Rating (Adjectival)**: Good**	79.00%

Performance Measure: 1.5.e Chemical Exposure Prevention

The number of exposures to toxic materials and physical and biological agents that are above applicable occupational exposure and medical removal levels will be tracked. A decreasing trend is expected. **(Weight = 7%)**

Assumptions:

- For FY99 the performance period is July 1, 1998 through June 30, 1999.
- "Action level" is defined as one-half of 8-hour TWA, STEL and Ceiling for the OSHA PEL, ACGIH TLV®, unless a different action level is specified by OSHA.
- Data for this measure is reported as the number of occurrences or exceedances versus the number of measurements taken.
- Exposure measurements will be corrected by the protection factor of the personal protective equipment in use.
- Some variability is expected which may not be indicative of a trend. Changes in operational levels or volumes shall be considered fully.
- Applicable exposures above the OSHA PELs resulting from an accident will be addressed by the local DOE office and the Laboratory.

Gradient:

Good:
- Ninety-five percent of the sampled exposures to toxic material/physical agents will be below the OSHA PEL.
- Substance specific sampling as required by 29 CFR 1910 is conducted.

Excellent:
- Ninety-five percent of the sampled toxic material/physical agent exposures will be below the ACGIH TLV® or other published occupational health standards.

Outstanding:
- 100% of exposures above the action level have been followed up by an industrial hygienist and corrective measures have been implemented when appropriate.

Performance Narrative:

In this performance measure the Laboratory has performed extremely well. The gradients for good, excellent, and outstanding, have all been fulfilled. The Industrial Hygiene Program is responsive to problems that arise. Program planning with a feedback loop that fully implements Integrated Safety Management is in the formative stages. The rating for this measure will improve with the maturation of the integrated safety management philosophy.

Performance Rating (Adjectival)**: Outstanding**	90.00%

Performance Measure: 1.5.f Accident Prevention

The baseline period for comparison is CY 1997 data. The Lab's Severity and frequency (defined as Lost Workday Case Rate (LWC) and Total Recordable Case Rate (TRC) respectively) of accidents during the performance period will be compared to the baseline period. The number of Bureau of Labor Statistics reportable occurrences of these accidents will be tracked. A downward trend is expected as compared to the baseline year. **(Weight = 7%)**

Assumptions:

- For FY99 the performance period is July 1, 1998 through June 30, 1999.
- Laboratory statistics will be collected for the baseline for all Lab incidents including subcontractors as reported to CAIRS.
- It is recognized that an initial increase may be experienced whenever a new prevention program is introduced and that some variability is expected which may not be indicative of a trend.
- For FY 2000 and future years, baseline assumptions will be reviewed and if appropriate updated by mutual agreement of the local DOE office and the Laboratory.
- Subcontractor operations/personnel are included for all subcontractors whose injury data are reported to CAIRS. Subcontractors are excluded if they are "servicing" the Laboratory (e.g., copy machine vendors or other transient workers).
- The Lab's 5 year goal for reduction of LWC and TWC is derived from industry best in class in agreement with DOE.

Gradient:

- Progress toward reduction goals are evaluated using the following figures.

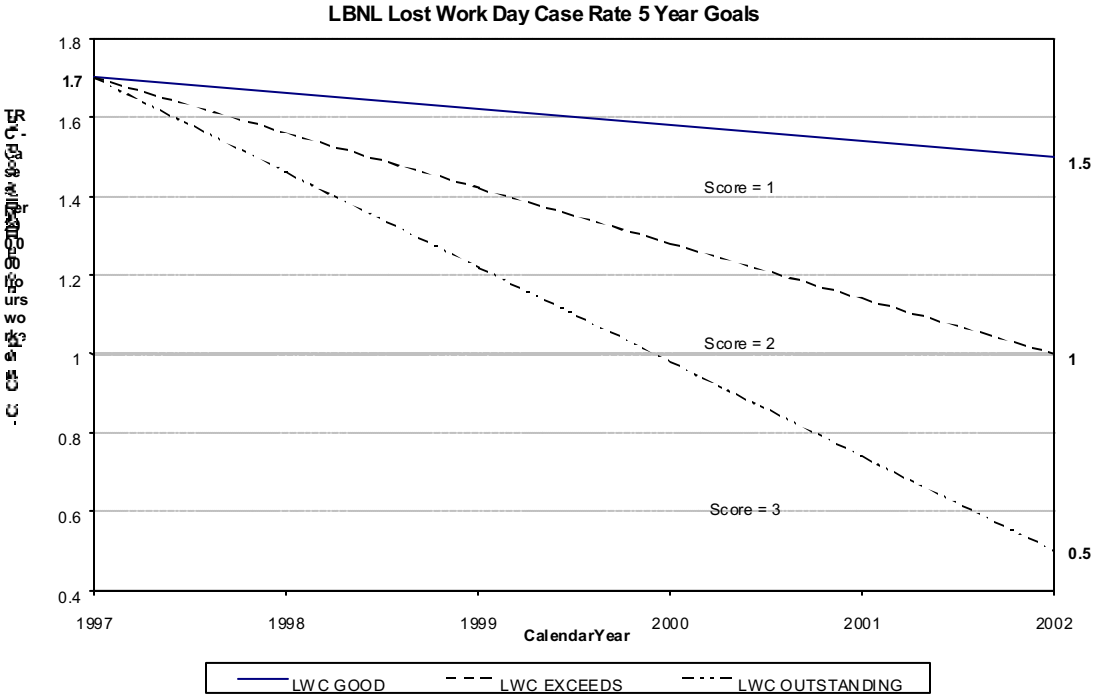


Figure 1: LBNL Lost Work Day Case Rate, 5 Year Goals

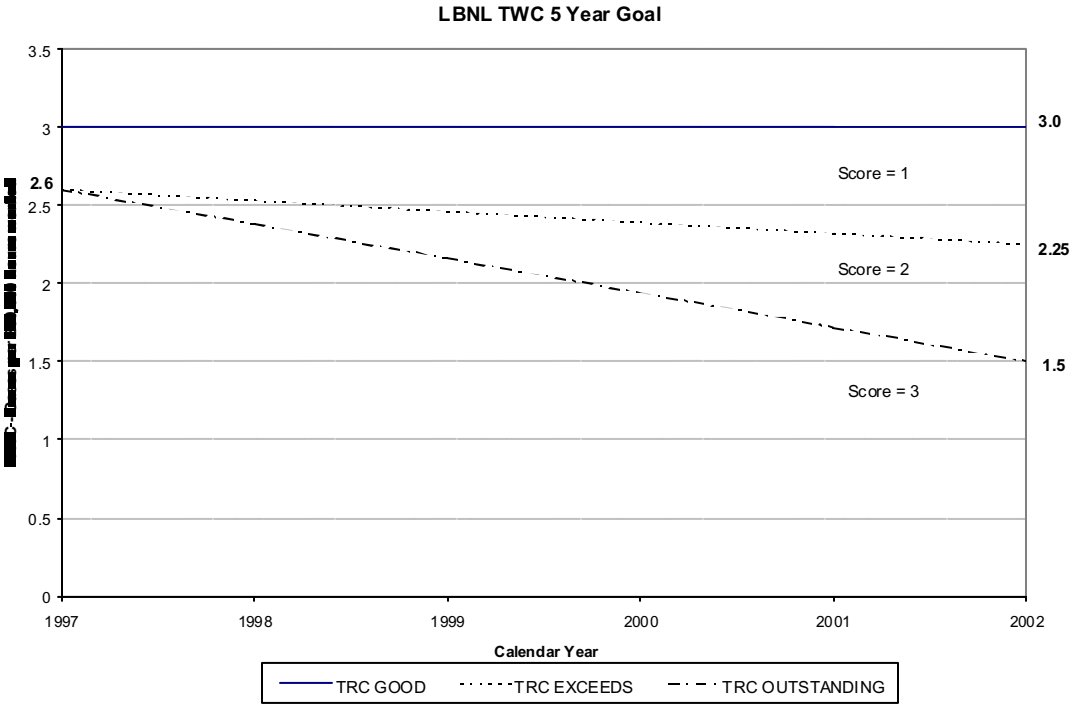


Figure 2: LBNL Total Recordable Case Rate, 5 Year Goals

Good:
- Performance is charted for LWC and TRC and scored and then summed. The sum for this gradient is 2 or 3.

Excellent:
- Performance is charted for LWC and TRC and scored and then summed. The sum for this gradient is 4 or 5.

Outstanding:
- Performance is charted for LWC and TRC and scored and then summed. The sum for this gradient is 6.

Performance Narrative:

LBNL set a very aggressive set of goals for this measure, with a five year goal for reductions that meets or exceeds those of the country's best companies. The Laboratory was unable to maintain its continued downward trend. Both Lost Workday Cases (LWC) and Tracked Reportable Cases (TRC) have increased over last year's data. TRC retreated (above baseline). Per LBNL, increase is due to ergonomic injuries. DOE OAK considers that LBNL needs to be more aggressive to achieve a downward trend. The Laboratory has identified where the largest number of new cases arose and has targeted them for increased attention in the future.

Performance Rating (Adjectival)**: Marginal**	69.00%

Performance Measure: 1.5.g Occupational Safety and Health

Hazards are recognized during Occupational Safety and Health assessments and serious and imminent danger situations are appropriately mitigated. **(Weight = 7%)**

Assumptions:

- Data will be collected for the period of July 1, 1997 through June 30, 1998.
- Imminent Danger situations and Serious violations are as defined by the OSHA Field Inspection Reference Manual and by Section 13(a) of the Occupational Safety and Health Act.
- Subcontractor operations/personnel are included if the subcontractor is performing part of the Laboratory's operations. Subcontractors are excluded if they are "servicing" the Laboratory (e.g., copy machine vendor or other transient workers).

Gradient:

Good:

- 70% of operations have documented evidence of annual safety inspection. All high hazard operations are inspected annually.
- Imminent Danger situations are mitigated immediately upon discovery.
- All Serious Violations are mitigated or corrected within 5 working days or an agreed-upon schedule. Until mitigation, equivalent protection or abatement will be implemented to ensure protection of workers.

Excellent:

- At least 90% of the scheduled formal self assessments have been completed and reports issued.
- At least 90% of the corrective actions have been completed on schedule.
- There is documented evidence that the lab has reviewed at least 90% of its workspaces, for those divisions reviewed in the current performance year, where there are hazards of medium and high level of concern as identified through the 1996 LBL IHA.

Outstanding:

- One hundred percent (100%) of the scheduled formal self assessments have been completed and reports issued.
- Corrective actions are consistently completed on schedule.

- There is documented evidence that the lab has reviewed 100% of its workspaces, for those divisions reviewed in the current performance year, where there are hazards of medium and high level of concern as identified through the 1996 LBL IHA.

Performance Narrative:

The Laboratory's documented self-assessment program is comprised of three components (1) division self-assessment program, (2) SRC MESH reviews, and (3) IFAs.

All Division self-assessments and IFA's were completed. Two out three MESH assessments were completed. Completion of scheduled self-assessments is excellent.

To date it is reported that 84 percent of the corrective actions arising from self-assessment inspection were completed. The corrective actions still open are low hazard deficiencies (Hazard Category 3) normally scheduled for completion within 90 days. The rate of completion of corrective actions is at the good level.

*(Note: The Laboratory updated corrective action statistics on 11/24/99 to 84 percent. It was reported in the final report rating as 76 percent completed as of March 31, 1999.

Performance Rating (Adjectival)**: Good**	79.00%

Performance Measure: 1.5.h Tracking Environmental Incidents

The number of environmental incidents will be measured. Environmental incidents include:

- violations resulting from regulatory inspections or regulatory reporting.
- reportable occurrences of environmental releases exceeding regulatory or permitted levels established by Federal, State or Local agencies (authorized by Federal or State agencies to implement Federal or State environmental statutes). **(Weight = 9%)**

Assumptions:

- Performance period for this measure is January 1, 1998 to December 31, 1998.
- Audit is defined as an external review of a program that results in a formal report to the Laboratory, with any findings tracked by the appropriate organizational group (e.g., LBNL-OAA).
- Environmental releases or excursions that remain within compliance limits will not be counted as incidents by this measure.
- The Laboratory has the option to apply a weighting factor to each incident, depending on its severity and magnitude. All releases that are serious will be given a weighing factor of 1, on a scale of 0 to 1. A release is considered serious unless an alternate weighting factor is proposed by Berkeley Lab. The Laboratory and DOE technical counterparts will jointly agree upon the assignment of an appropriate weighting factor for non-serious releases.
- Percent increase is based upon comparisons made to the average of the 3 previous years.
- When the number of incidents is less than or equal to 3, scoring will be based solely on this number.

Gradient:

Good:

- More than 3 incidents and an increase in incidents by less than or equal to 50%.

Excellent:

- More than 1 and less than or equal to 3 incidents.

Outstanding:

- 1 incident or less.

Performance Narrative:

LBNL had five incidents during the rating period of CY 1998. Two of the incidents resulted in significant violations of wastewater discharge standard for chromium from the B77 treatment unit.

LBNL subsequently spent (still ongoing) considerable effort in identifying and correcting deficiencies with this treatment unit. Although not relevant to the score applied for FY 1999, it is notable that for CY 1999 to date (as of 11/8/99) there have been zero occurrences.

The other three incidents are considered minor violations and they presented no threat of release of environmental pollutants. All three of these violations were corrected quickly. Based upon a weighting factor worked out between DOE and LBNL, each of these minor violations would rate 1/3 of a point for the purpose of rating LBNL, for a combined score of one point.

The total LNBL score would be two points for the chromium violations plus one point for the three minor violations for a total score of three points. This puts LBNL in the **excellent** category for this performance measure. The 82 percent score reflects the additional problems LBNL had with incidents this rating period (nearly slipped into the "good" category).

Although not relevant to the score applied for FY 1999, it is notable that for CY 1999 to date (as of 11/10/99) there have been zero incidents at LBNL. This is more consistent with their usual performance.

Performance Rating (Adjectival)**: Excellent**	82.00%

Performance Measure: 1.5.i Waste Reduction and Recycling

The Laboratory continues to progress towards meeting the DOE's pollution prevention goals for the year 2000. **(Weight = 10 %)**

Assumptions:

- DOE's pollution prevention goals by waste type, that are measured by this performance measure, are defined as follows:
  - Reduce by 50% the generation of radioactive waste (defined as TRU and LLW) from routine operations;
  - Reduce by 50% the generation of low-level mixed waste from routine operations;
  - Reduce by 50% the generation of hazardous waste from routine operations; and
  - Reduce by 33% the generation of non-hazardous waste from routine operations.
- For FY99 the performance period is January 1, 1998 through December 31, 1998.
- CY93 waste generation quantities will be used as a baseline for measuring waste reductions. (CY94, corrected to reflect previous years improvements, will be used for nonhazardous waste at LLNL**.** CY93 baselines for low level mixed and radioactive wastes will be determined by linear extrapolation of the high quality data for CY94 and CY95 at Berkeley Lab.)
- Recycling, reuse and exchange are considered to be methods of waste minimization and will be tracked.
- Any significant new project, activity or increase in workload will be evaluated for pollution prevention/waste minimization opportunities. After pollution prevention/waste minimization opportunities are implemented for the project or activity, the resulting new waste stream will not be included in the waste reduction calculation**.**
- Cleanup and stabilization waste (including environmental restoration waste, stabilization of nuclear and non-nuclear materials, and deactivation and decommissioning of facilities), legacy, construction debris and USEC waste will not be included in the calculations for meeting the waste reduction goals but will be included in the discussion on meeting the recycling goal.
- Waste generation will be reported and measured in the same way that it has been reported for this performance measure in previous years. (Routine hazardous waste generation at Berkeley Lab will be tracked using the total quantities shipped off site regardless of destination, as reflected in the EPA Biennial Reports).

Gradient:

- Progress toward reduction goals are evaluated by either using the following charts or progress on an agreed- to "waste type" reduction plan:

Chart for or routine mixed, radioactive and hazardous waste streams:

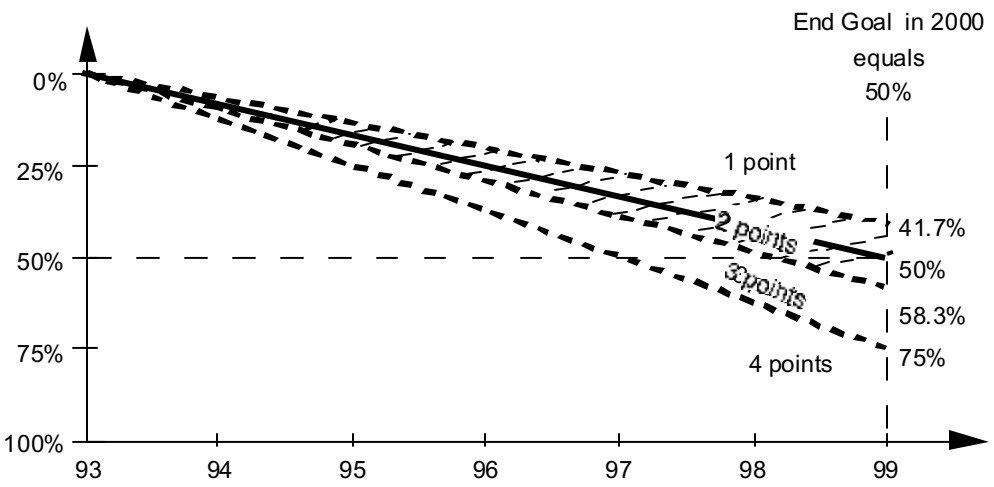
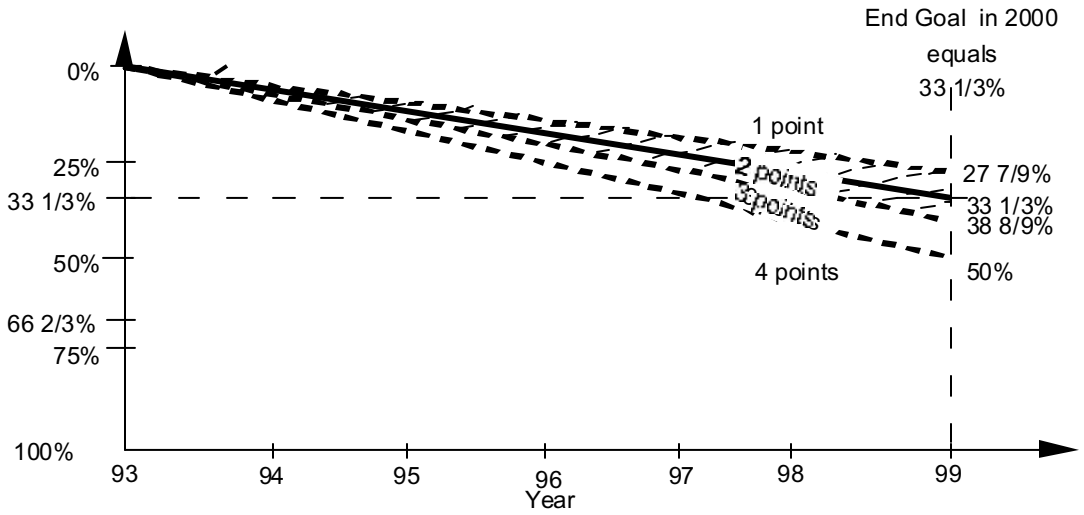


Chart for routine sanitary waste streams:



Good:

- A reduction in generation of each waste type is calculated and scored (1 to 4 points) then summed. The sum for the four waste types is 7, 8 or 9 points.

Excellent:

- A reduction in generation of each waste type is calculated and scored (1 to 4 points) then summed. The sum for the four waste types is greater than 9 points but less then 12.

Outstanding:

- A reduction in generation of each waste type is calculated and scored (1 to 4 points) then summed. The sum for the four waste types is greater than 12 points and less than 16.

- An annual increase in the types and amounts of wastes and materials recycled and/or reused onsite or offsite (after adjustment for source reduction).

Performance Narrative:

LBNL continues to make outstanding progress towards the pollution prevention goals for the Calendar Year (CY) 2000. LBNL reduced the generation of all four waste types. They have already exceeded the CY2000 goals in three of the four waste types. Routine low level radioactive waste reduction (the fourth waste type) is making good progress toward meeting the CY2000 goals (it ended the year at a point slightly above the planned path to meet the goal). Low level radioactive waste was higher than normal in CY1998 due to one time Laboratory clean outs and process conversions. Generation rates for the first half of CY 1999, point to significantly reduced amounts of low level radioactive waste. Continued full operation of the Hazardous Waste Handling Facility is a noteworthy accomplishment.

It is clearly evident that the program organization, highly motivated staff, waste stream prioritization, return-on-investment project implementation, and generator assistance philosophy are all paying off towards continued progress on the goals. The Laboratory is a true leader among the Oakland Operations sites in pollution prevention and is currently exceeding the DOE Complex-wide goals for pollution prevention.

Performance Rating (Adjectival)**: Outstanding**	95.00%

Performance Area: Facilities Management

Performance Objective: #1 Real Property Management

The Laboratory will effectively manage Real Property. **(Weight = 5%)**

Criteria: 1.1 Real Property Management

Real property is effectively managed consistent with mission, requirements, and DOE direction. **(Weight = 5%)**

Performance Measure: 1.1.a Program Implementation

Number of completed milestones/milestones scheduled for completion. **(Weight = 5%)**

Assumptions:

Intent is to measure the effectiveness, completeness, and timeliness of implementation of Real Property management actions. Milestones will be established in partnership with DOE and made a matter of record in the first month of the fiscal year. Milestones may be established for Facilities Information Management System completeness, office space utilization, substandard building space conversion, real property leases, etc.

Performance Gradient:

Outstanding - 0.90

Excellent - 0.80

Good - 0.70

Marginal/Unsatisfactory- less than 0.70

Performance Narrative:

LBNL continues to demonstrate outstanding performance, by meeting all fourteen milestones in the areas of Facilities Information Management System (FIMS), Substandard/Excess Space, Space Utilization, and Off-Site Real Property Management for FY 1999 rating period.

FIMS plan to populate new data has been accomplished. Current data is validated regularly to insure accuracy and continues to serve as LBNL's corporate database. The Substandard/Excess Space Conversion plan for FY 1999 was completed. Studies to better manage Wet Lab Space Utilization were completed and utilization rate standards developed. Off-Site Leases continue to be reduced and leases consolidated when possible.

During FY 1999 LBNL completed the consolidation of off-site administrative functions in Berkeley Tower (Building 937). This building provides an efficient, single off-site leased location for activities that were previously split between two leased buildings, several blocks apart, and has already been successful in improving communications between organizations.

LBNL continues to consolidate off-site leased space by moving out of Building 934 at Aquatic Park. When completed in spring of 2000, this action will reduce off-site space by 30,720 gross square feet (24,074 usable) at an annual cost savings of $795,444.

The site for the Berkeley Computer Facility (Building 943) was selected and design work to move various segments of Computing Sciences operations to that building is in it's final stages. Facilities Planning is actively soliciting other occupants for Building 943 to create single-tenant occupancy.

Performance Rating (Adjectival)**: Outstanding**	98.00%

Performance Objective: #2 Physical Assets Planning

The Comprehensive Integrated Planning Process should reflect current and future Laboratory needs. **(Weight = 14%)**

Criteria: 2.1 Comprehensive Integrated Planning Process

The Laboratory develops, documents, and maintains a comprehensive integrated planning process that is aligned with DOE mission needs. **(Weight = 14%)**

Performance Measure: 2.1.a Effectiveness of Planning Process

Assess how the planning process is implemented to achieve maximum effectiveness in anticipating and articulating DOE and Laboratory needs. **(Weight = 14%)**

Assumptions:

The Laboratory will work with DOE counterparts in a cooperative effort to continuously evaluate the effectiveness of the comprehensive land-use planning process through the development of Laboratory specific planning elements/milestones. Site specific planning elements/milestones will be made a matter of record in the first month of the fiscal year.

Performance Gradient:

Outstanding - 0.90

Excellent - 0.80

Good - 0.70

Marginal/Unsatisfactory- less than 0.70

Performance Narrative:

DOE OAK has assessed the Comprehensive Integrated Planning (CIP) process for the LBNL for FY 1999 as **outstanding** with a rating of 94.0 percent. The main activities conducted by the LBNL

Facilities Planning Office during this evaluation period are: the successful execution of its work plan for CIP, their involvement in the selection of the off-site facility for the National Energy Research Scientific Computing (NERSC) Center, the update of the Life Cycle Asset Management (LCAM) Partnering Agreement between LBNL and DOE OAK, and the successful execution of the Assessment Management Plan between LBNL and DOE OAK. LBNL continues to be a viable site to DOE, the scientific community, user groups, commercial and public partnerships, and to the University of California. This is an indication of effective physical plant and land use planning.

For FY 1999, LBNL Facilities and Planning and DOE OAK agreed to accept a comprehensive work plan that contained eight major topical areas and a total of forty-three specific milestones and ongoing activities. LBNL successfully completed all milestones and satisfied ongoing activities. In one case, the original milestone plan could not be executed by Facilities and Planning due to circumstances beyond their control. However, LBNL met the intent and spirit of the milestones (Archibus Development) by implementing an alternate, more tedious method. LBNL Facilities and Planning was a key participant in the determination to pursue an off-site lease and the actual selection of the off-site location for the NERSC Program. Despite tight schedules and extensive coordination, Facilities and Planning was able to locate a site and enter into a lease agreement in a timely manner. And finally, LBNL successfully executed both the intent and spirit of the LCAM Partnering Agreement and the Assessment Management Plan. Both documents were updated this review period and continue to represent DOE OAK and LBNL's commitment to performance-based contracting. DOE OAK remained apprised of major activities through detailed quarterly reporting and by various operational awareness-type meetings throughout the year.

For this rating period, it was mutually agreed that specific milestones and due dates would not be part of the formal work plan. Rather, major topical areas would be discussed and its goals documented. Informally milestones with due dates were listed and also mutually agreed to by both parties. LBNL did report the status of every milestone through its completion on a quarterly basis.

Quarterly reporting and operational awareness activities need to continue to assure the successful execution of the work plan, to assure effective asset and land use planning, and to assure and identify process improvements.

Performance Rating (Adjectival)**: Outstanding**	94.00%

Performance Objective: #3 Project Management

The Laboratory will complete construction projects within approved budgets and schedules. **(Weight = 33%)**

Criteria: 3.1 Construction Project Performance

Construction projects greater than $5000K (regardless of type of funds) achieve schedule, and performance objectives. **(Weight = 20%)**

Performance Measure: 3.1.a Work Performed

Number of milestones completed/number of milestones planned for completion. **(Weight = 20%)**

Assumptions:

The intent is to measure actual progress against that planned for the fiscal year and for the Laboratory to execute projects and cost project funds in a timely manner. A milestone list for all active projects will be negotiated with DOE and made a matter of record in the first month of the fiscal year. Only significant milestones will be listed, but each active project will have at least one milestone per year. By mutual agreement between the Laboratory and DOE, milestones may be weighted for significance, for late/early completion, and/or for improved/diminished scope. Negotiated milestones are not to be interpreted as baseline change approval. At LBNL, milestones for the SNS project are selected from the Baseline/work package approved by the Oak Ridge National Laboratory (ORNL) and/or the DOE SNS Project Office at Oak Ridge, consistent with the SNS Project inter-Laboratory and DOE inter-Office Memoranda of Agreement.

Performance Gradient:

Outstanding - 1.00

Excellent - 0.90

Good - 0.80

Marginal/Unsatisfactory- less than 0.80

Performance Narrative:

Initially, 18 milestones were selected to measure the performance against baselines for construction projects greater than $500,000 (regardless of type of funds). Milestones for the following five construction projects were used:

B51 1st Floor Space Conversion
B6 2nd Floor Lab & Office Space
Blackberry Switching Station Replacement
B77 Rehabilitation
Joint Genome Institute, Build-out of Leased Production Sequencing Facility

Of these 18 milestones, the milestone for Receipt of Unit Substations (Blackberry Switching Station Replacement) was dropped because the contract could not be awarded as a result of contractor bids exceeding the government estimate. The unusually active construction market in the San Francisco Bay Area resulting in a limited pool of available contractors was the primary reason for the high bids. Another contributing factor was increased requirements for subcontractor construction safety management as a result of the laboratory wide integrated safety management program. LBNL staff worked with DOE OAK to restructure the project such that the original mission need could be fulfilled at the original total estimated cost. Consequently, DOE OAK approved a baseline change in concurrence with LBNL letter dated June 16, 1999 and agreed to drop this milestone.

Subsequently, DOE HQ added six milestones to measure the performance of the Spallation Neutron Source, a scientific R&D project.

Project milestones completed on schedule / Project milestones scheduled for completion = 23/23 = 1.00.

LBNL met all 23 milestones. Thus, LBNL's performance in this area has remained **outstanding** as it was last year. This outstanding performance can be attributed to LBNL staff's proactive approach to project management and their conscientious efforts to keep DOE OAK informed well in advance of anticipated or impending problems.

Performance Rating (Adjectival)**: Outstanding**	95.00%

Criteria: 3.2 Construction Project Cost

Line-Item projects (including any project $5000K and over regardless of type of funds) meet cost baselines. **(Weight = 13%)**

Performance Measure: 3.2.a Total Estimated Cost (TEC)

Estimated cost at completion for all active projects/performance measure baseline TEC for all active projects. **(Weight = 13%)**

Assumptions:

The intent is to measure Laboratory performance in executing projects within the approved TEC. The performance measure baseline is the original approved baseline adjusted for allowed cost or work scope increases. DOE determines whether cost increases are allowed. The method of calculating estimated cost at completion, including or excluding contingency, will be made a matter of record in the first month of the fiscal year. Contingency and cost reductions will be reflected in the estimated cost at completion. Disposition of pending Baseline Change Proposals, for the purposes of this measure, will be made by mutual agreement. By mutual agreement, projects may be weighted for significance. At LBNL, for the SNS Project, the performance period Budgeted Cost of Work Schedule (BCWS) is that which is approved by the ORNL and the DOE SNS Project Office.

Performance Gradient:

Outstanding - 0.98

Excellent - 0.99

Good - 1.00

Marginal/Unsatisfactory- greater than 1.00

Performance Narrative:

Four Line Item projects were rated for FY 1999. The current baseline total estimated cost (TEC) vs. the actual/estimated cost at completion for all active projects were as follows:

Project	Baseline TEC	Actual/Estimated
Electrical Systems Rehabilitation, Phase IV	$6,500,000	$6,500,000
Sanitary Sewer Restoration	2,400,000	2,377,000
B77 Rehab Bldg Structure & Systems	8,000,000	8,000,000
Spallation Neutron Source Front End	18,400,000	18,400,000
Totals:	**$35,300,000**	**$35,277,000**

Estimated cost at completion for all active projects / Performance baseline TEC for all active projects = $35,277,000 / $35,300,000 = 0.999.

The contractor bids for the Electrical Systems Rehabilitation project exceeded the LBNL cost estimate. The unusually active construction market in the San Francisco Bay Area resulting in a limited pool of available contractors was the primary reason for the high bids. Another contributing factor was increased requirements for subcontractor construction safety management as a result of the laboratory wide integrated safety management program. Through the Monthly Project Status meetings and frequent contacts between LBNL and DOE OAK staff, DOE OAK was alerted in advance of the potential need to downscope the Blackberry Switching Station Replacement project. Consequently, DOE OAK was able to work together with LBNL to restructure the project such that the original scope was decreased while meeting the original mission need at the original total estimated cost. The portion of the scope which was deleted will be funded at a later date through LBNL operating funds. LBNL is credited with developing the basic framework upon which the restructuring was based.

Performance Rating (Adjectival): **Good**	71.00%

Performance Objective: #4 Maintenance

The Laboratory will maintain capital assets to ensure reliable operations in a safe and cost effective manner. **(Weight = 33%)**

Criteria: 4.1 Facility Management

Facility operations and maintenance are effectively managed consistent with mission, risks, and costs. **(Weight = 13%)**

Performance Measure: 4.1.a Program Implementation

Sum of completion percentages for all milestones worked/milestones scheduled for completion. **(Weight = 13%)**

Assumptions:

Intent is to measure the effectiveness and timeliness of the Laboratory's facility maintenance program. A list of mutually agreed milestones will be made a matter of record in the first month of the fiscal year. For multiple-facility milestones, completion percentage will be an average of the completion percentages for each facility included in the milestone. If no milestones are selected for the fiscal year, the weight of Performance Measure 4.1.a will be added to Performance Measure 4.2.a.

Gradient:

Outstanding - 90%

Excellent - 80%

Good - 70%

Marginal/Unsatisfactory- less than 70%

Performance Narrative:

LBNL Maintenance Program Plan for FY 1999 included sixteen maintenance milestones with primary focus on activities designed to improve quality of procedures and better track and manage maintenance requirements. The maintenance program milestones were established and documented in LBNL's letter of 28 October 1998. All milestones were completed as originally scheduled for a ratio of 1.00. Although the milestones included the procedural updates related to Preventive Maintenance (PM) program quality assurance and inventory control, the overall performance of the PM program was not substantially changed. As a result, LBNL has incorporated modifications to their FY 2000 milestones that specifically address PM program performance. The most noteworthy milestone accomplished was LBNL's pilot property outsource inspection which was successful in defining facility and infrastructure needs by providing reliable and accurate condition and costing information for the annual and 5 year maintenance plans. Considering FY 1999 milestone selection and effectiveness, an overall rating of 95 percent is justified for this performance measure.

Performance Rating (Adjectival)**: Outstanding**	95.00%

Criteria: 4.2 Maintenance Program

The facility maintenance program is effectively managed and performed. **(Weight = 20%)**

Performance Measure: 4.2.a Maintenance Index

Performance index based on EFCOG Maintenance Performance Indicators. **(Weight = 20%)**

Assumptions:

A composite index will be calculated using a weighted average for selected performance indicators. The list of performance indicators, and the calculation algorithm will be made a matter of record in the first month of the fiscal year. Performance gradient calculations will consider "Best-in-Class" for comparable Energy Facility Contractors Group (EFCOG) benchmarking participants and the EFCOG average for comparable activities/sites.

Performance Gradient:

Outstanding - 0.90

Excellent - 0.80

Good - 0.70

Marginal/Unsatisfactory - less than 0.70

Performance Narrative:

LBNL's Facility Maintenance Program composite index was .90 for FY 1999. This rates LBNL's overall maintenance performance **outstanding** comparable to the "Best-in-Class" among the Energy Facility Contractors Group (EFCOG) benchmarking participants for the selected performance indicators. Of particular noteworthiness is LBNL's plant stewardship benchmark performance. This benchmark measures mission critical backlog as a percent of real plant value which is an indicator of overall plant condition. LBNL's score well surpasses EFCOG's best value, which warrants an overall rating of 95% for this performance measure. LBNL has also utilized benchmark data to further improve their Preventive Maintenance Program which has resulted in specified action plans. These plans have been incorporated into the FY 2000 maintenance program milestones. In addition, LBNL

has worked closely with DOE OAK to improve definitions and calculation algorithm to further enhance to validity of index results.

Performance Rating (Adjectival)**: Outstanding**	95.00%

Performance Objective: #5 Utilities/Energy Conservation

The Laboratory will maintain a reliable utility system and conserve energy. **(Weight = 15%)**

Criteria: 5.1 Reliable Utility Service

Maintain reliable utility service. **(Weight = 8%)**

Performance Measure: 5.1.a Utility Service

Total number of customer hours of utility service less the number of customer hours of unplanned outages/total customer hours. **(Weight = 8%)**

Assumptions:

Unplanned outages that are caused by occurrences outside the boundary of the Laboratory's utility system may be excluded. Utilities to be measured, with assigned weights will be made a matter of record in the first month of the fiscal year. Definition of "customer hours" will be defined separately for each utility measured. A 12-month running average will be reported.

Performance Gradient:

Outstanding - 99.995%

Excellent - 99.990%

Good - 99.982%

Marginal/Unsatisfactory - less than 99.982%

Performance Narrative:

It's hard to improve upon perfection. LBNL has achieved a perfect record of 100 percent electricity reliability, with no unplanned electricity outages during the rating period. In addition, LBNL made strides towards implementation of the Grizzly Sub-Station arrangements with UC Berkeley, which will help ensure continued electricity reliability in the future.

Performance Rating (Adjectival)**: Outstanding**	100.00%

Criteria: 5.2 Energy Consumption

Effectively manage energy usage. **(Weight = 2%)**

Performance Measure: 5.2.a Building Energy

The reduction in energy usage from FY85 levels in BTUs per gross square feet of building expressed as a percent of FY85 energy usage. **(Weight = 2%)**

Assumptions:

Reduction for FY99 interpolated from the DOE goal of a 30% reduction from FY85 levels by FY2005. Utility loads associated with experimental or industrial processes may be excluded from this measure by mutual agreement.

Performance Gradient:

Outstanding - 25%

Excellent - 22.5%

Good - 21%

Marginal/Unsatisfactory - less than 21%

Performance Narrative:

LBNL FY 1999 building energy use per square foot was 33.8 percent less than the FY 1985 baseline, far exceeding this year's goal of 21 percent. However, a reversal in the rate of the Laboratory's decline started in FY 1995, when the comparable number was at 42 percent. The trend reversal is due to increased energy use stemming from the addition of new space and the conversion of existing space for energy intensive research activities, equipment, and building systems. Although the rate of decline slowed, energy conservation continues to exceed DOE's FY 2005 goal of a 30 percent reduction.

Performance Rating (Adjectival)**: Outstanding** 95.00%

Criteria: 5.3 Energy Management

Energy initiatives are managed consistent with a comprehensive energy management plan.

(Weight = 5%)

Performance Measure: 5.3.a Energy Goals

Energy goals accomplished/goals scheduled to be accomplished in accordance with the plan.

(Weight = 5%)

Assumptions:

The energy management plan will be made a matter of record in the first month of the fiscal year.

General Note: Plans, lists, and milestones made a matter of record in the first month of the fiscal year may be revised during the year by mutual agreement between the Laboratory and DOE Facility Functional Managers.

Performance Gradient:

Outstanding - 0.90

Excellent - 0.80

Good - 0.70

Marginal/Unsatisfactory - less than 0.70

Performance Narrative:

LBNL accomplished all 14 of its FY 1999 energy management plan goals. These included completion of energy management studies, retrofit projects, construction design reviews, equipment specification reviews, actions to help ensure procurement of energy efficient products, energy management training, employee energy awareness, and technical support to DOE's Federal Energy Management Program and other Federal Agencies.

Performance Rating (Adjectival)**: Outstanding** 95.00%

Performance Area: Financial Management

GENERAL ASSUMPTIONS FOR ALL FINANCIAL MANAGEMENT PERFORMANCE MEASURES

Assumptions:
Where appropriate incorporate, in the self assessment, historical trends as the data becomes available.

Laboratory-specific targets identified by end of January of each year contingent on availability of benchmarking results.

Note: Laboratory-wide cost savings initiatives require the highest level of visibility and Laboratory commitment. For this reason, Performance Objectives, Criteria and Measures (POCMs) addressing cost savings are included in the Laboratory Management POCMs instead of here in the Financial Management section.

Performance Objective: #1 Customer Focus and Satisfaction

Financial Management's practices are customer oriented. **(Weight = 15%)**

Criteria: 1.1 Methods to Evaluate Customer Expectations

Maintain systematic methods/programs to collect information and determine internal and external customer needs and levels of satisfaction. **(Weight = 5%)**

Performance Measure: 1.1.a Effectiveness of Methods

Degree to which effective and systematic methods to collect, document, and use customer feedback information are defined and deployed. **(Weight = 5%)**

Assumptions:

Identify internal and external customer groups. Describe what and how information is collected, frequency and methods of collection, and how the finance and budget organizations evaluate and

improve their processes for determining customer satisfaction, requirements, expectations, and preferences in support of missions.

Performance Gradient:

A Good rating is achieved by developing and implementing the capability for systematically obtaining customer feedback.

Factors that will be considered for a higher rating include:

- how well coverage of customer groups is identified
- methods used are effective customer communication tools
- customer learning strategies have continuity and are consistently deployed
- customer feedback is used to improve products/services provided to customers
- frequent/ongoing collection of customer feedback information
- formal processes used to collect, document, and use customer feedback information
- methods used are tailored to customer groups identified
- meaningful customer feedback obtained

An Excellent rating is achieved by demonstrating that a fact-based customer improvement process is used; clear evidence that processes for gathering customer information have been improved over time.

An Outstanding rating is achieved by demonstrating that a very-strong, fact-based process is used; strong refinement and integration which is backed by outstanding analysis. Approach is deployed without any significant shortfalls.

Performance Narrative:

LBNL exceeds the expectations for this measure. They successfully identified their customer groups and developed a comprehensive and systematic approach for understanding their needs and requirements. With this approach, LBNL was able to maintain the strategy that segments customers, identify specific needs and expectations, and allowing the flexibility to adjust to customer requests. The continued infrastructure improvements, specifically, the financial system conversion and update, providing the Chief Financial Officer (CFO) additional tools to satisfy the customer requirements.

Fact based customer improvements were achieved by various means such as surveys, electronic communications, and interviews with key customers, group meetings, and customer focus teams. The methods used by LBNL to determine if their customer service is effective are comprehensive and supportable.

Information on customer expectations regarding responsiveness, timeliness, availability of data, and general comments was systematically collected for each customer segment. Between the travel office surveys, questionnaires to target groups, group meetings, and personal interviews, LBNL has improved its documentation and analysis capabilities. In order to improve operational effectiveness

and provide convenient access for customers, the entire financial services units were consolidated to the same building.

Notable changes reflect how the CFO organization now views customer service. It is considered a high priority by leadership at the senior and middle management levels to nurture a service culture throughout the organization. Customer service is also included in individual work plans and managerial objectives. These changes are observed and verified through day-to-day observations and interactions of DOE personnel.

For the improvement in customer service, LBNL deserves an **excellent** rating.

Performance Rating (Adjectival)**: Excellent**	89.00%

Criteria:	**1.2**	**Customer Satisfaction**	
Improved levels of customer satisfaction.			**(Weight = 10%)**

Performance Measure:	**1.2.a**	**Customer Satisfaction Results**	
Improved levels of customer satisfaction over time.			**(Weight = 10%)**

Assumptions:

Describe most current levels and trends in key measures and/or indicators of customer satisfaction and dissatisfaction.

Performance Gradient:

A Good rating is achieved by demonstrating that Finance and Budget customers are generally satisfied with the products and services provided.

Factors that will be considered for a higher rating include:

- demonstrated improved or sustained high levels customer satisfaction
- customer satisfaction is maintained across most customer groups
- no general dissatisfaction exists with primary products/services provided

An Excellent rating is achieved by demonstrating that current performance is excellent in most areas of importance to the customers' key business requirements. Most improvement trends and/or performance levels are sustained at a very good relative performance levels.

An Outstanding rating is achieved by demonstrating that current performance is outstanding in most areas of importance to the customers' key business requirements with outstanding improvement trends and/or sustained outstanding performance levels.

Performance Narrative:

LBNL exceeds the expectations for this measure. The Laboratory's General Accounting Division conducted a telephone survey of customers who required assistance within the past 6 months. Responses indicated that customers were satisfied, with an overall rating of 88 percent. They acknowledge that new systems and improvements such as the Financial Management System (FMS)

and the Project Management Tracking System (PMTS) will make the CFO Organization more effective and benefit the Laboratory in the long term.

With the financial system enhancements, the Laboratory's resource administrators have become more comfortable and confident in CFO systems. In the past, very few used the CFO reports. Today, more divisional resource managers utilize the CFO systems and reports. DOE day-to-day operational awareness, confirmed improved customer satisfaction.

For improved customer satisfaction and increased awareness of customer service LBNL receives an **outstanding** rating in this area.

Performance Rating (Adjectival)**: Outstanding**	90.00%

Performance Objective: #2 Operational Effectiveness

Achieve cost effective and efficient financial management operations by applying available resources to continuous improvement efforts. **(Weight = 30%)**

Criteria: 2.1 Leadership in Improving Financial Management Efficiency and Effectiveness

Consistent with DOE requirements and plans, take proactive leadership role to improve the financial management effectiveness and efficiency of the budget and financial processes and the financial reporting systems. **(Weight = 17%)**

Performance Measure: 2.1.a Quality Performance in Reporting Processes

Budgets and financial reports and information, analyses, estimates, and proposals submitted will be evaluated for minimal time/form/content deficiencies and incorporate budget validation and other systematic customer feedback. **(Weight = 5%)**

Assumptions:

The annual budget process and DOE routine periodic reports will be measured for timeliness and quality by measuring on-time performance. A narrative will describe the continuous process/product improvements, internal process used to validate the estimates including a discussion of the balances between programmatic and distributed budget requirements, and the proactive activities related to this Performance Measure.

Performance Gradient:

A Good rating is achieved by meeting customer due dates and by demonstrating tangible incremental improvements in these processes and/or in the products developed.

Factors that will be considered for a higher rating include:

- reductions in cycle time and/or cost, automation improvements and initiatives
- proactive activities such as training and development of Financial Management's staff and internal customers, and coordination with other divisions/ organizations to address financial concerns
- customer feedback and other relevant information

- early submission of accurate and complete reports such as MARS/FIS, budgets, and DIMS prior to DOE's due dates
- extent of budget validation, and quality and timeliness of uncosted balance analyses
- quality, depth, and timeliness of major financial analyses and reports

An Excellent rating is achieved by demonstrating that current performance is excellent in most areas of importance to the customers' key business requirements. Most improvement trends and/or performance levels are sustained at very good relative performance levels.

An Outstanding rating is achieved by demonstrating current performance is outstanding in most areas of importance to the customers' key business requirements. Outstanding improvement trends and/or sustained outstanding performance levels are achieved in most areas with strong refinement and integration which is backed by outstanding analysis.

Assumptions:

The measurement of special ad hoc DOE requests regarding budgets, financial information, analyses, estimates, and proposals submitted will include only formal written requests with deadlines of 8 or more working hours.

Performance Gradient:

A Good rating is achieved with a 90% on-time performance with acceptable quality as determined from customer feedback.

Factors that will be considered for a higher rating include:

- on-time performance greater than 90%
- good customer feedback
- process improvements, cost, and cycle time reductions
- handling a higher volume or more complex requests

An Excellent rating is achieved by demonstrating that current performance is on time more than 90% of the time, and quality is excellent in most areas of importance to the customers' key business requirements. Most improvement trends and/or performance levels are sustained.

An Outstanding rating is achieved by demonstrating that current performance is on time more than 95% of the time and quality is outstanding in most areas of importance to the customers' key business requirements. Outstanding improvement trends and/or sustained performance levels are achieved in most areas with strong refinement and integration which is backed by outstanding analysis.

Performance Narrative:

LBNL exceeds the expectations for this measure. LBNL submitted their FY 2001 Budget Submission on time and consistently provided Financial Information System (FIS) transmissions two-days early. LBNL responded to DOE periodic and ad hoc requests timely, with 100 percent on-time rating. Almost 70 percent were early. The FMS system implemented by LBNL resulted in more consistent and accurate information for both internal customers and monthly data submissions. The enhancements reduced cycle time, improved quality, accuracy, and timeliness of reports, and they provided better financial control capabilities within the Laboratory. LBNL is implementing a Project Management Tracking System (PMTS), enabling them to adhere to the projected Collaborative Management Environment (CME) requirements in the next budget cycle. Continued system improvement and increased training programs reflects the CFO goal to be proactive in addressing the Laboratory's financial concerns and overall knowledge.

Following the April 1999 submission of the FY 2001 budget, the DOE OAK and LBNL Budget Offices conducted a joint budget validation. Validation of this submission consisted of the Physics Division, Accelerator and Fusion Research Division, Environmental Energy Technology Division, and Life Science Division. The review covered $75 million of the LBNL budget, or approximately 20 percent. DOE OAK reviewed the Field Work Proposals, verified the consistency of overhead and labor rates used, and ensured backup documentation was maintained and justifiable.
The DOE OAK report to Headquarters confirmed that the pricing validation review of the LBNL FY2001 Budget was supportable and cost estimates were reasonable.

LBNL tracked their response time to formal requests for financial, statistical, or analytical information from DOE OAK. The results show that Financial Services responded timely to all DOE OAK requests. In addition to formal requests, DOE OAK often made requests informally via telephone or e-mail. Although these requests were not tracked, the CFO staff was always responsive. They were helpful in determining what information was available, its limitations, and identifying alternatives if necessary. An **outstanding** rating is warranted for improvements in the annual budget process, periodic reporting and prompt responses to formal and informal DOE requirements.

Performance Rating (Adjectival)**: Outstanding**	98.00%

Performance Measure: 2.1.b Leadership in Systems Improvements

Degree to which proactive leadership supports DOE and Laboratory initiatives for continued contractor financial systems improvements. **(Weight = 12%)**

Assumptions:

Narrative will describe the Laboratory's progress in support of this criterion, using existing tools and the Financial Management Systems (FMS) plan.

Performance Gradient:

Factors that will be considered for Good rating include:

- timeliness of the FMS plan
- efforts are directed at initiatives with the most value added
- involvement in DOE's initiatives
- progress towards short-term initiatives

Factors considered for a higher rating include:

- progress towards long-term initiatives
- proactiveness in seeking opportunities for supporting DOE initiatives
- improved capacities, capabilities, and/or cost efficiencies for other financial processes not addressed in measure 2.2
- positive customer feedback

An Excellent rating is achieved by demonstrating that current financial systems are excellent in most areas of importance to the customers' key business requirements, areas of leadership are shown, with very good relative performance levels.

An Outstanding rating is achieved by demonstrating that current performance is outstanding in most areas with significant improvement trends and/or sustained excellent performance levels in most areas. Demonstrate improved capacities, capabilities, and/or cost efficiencies. Strong evidence of industry and comparative leadership is demonstrated in many areas.

Performance Narrative:

LBNL's Financial Management Systems Plan included detailed description of the various components of the financial system and integrations between systems. It evidences systematic and thoughtful planning, and application of new technologies to provide better, more timely information to customers, and achieve system and cost efficiencies. Accounts Payable, Accounts Receivable, and Billing

applications were installed on a new Litton system, which provides faster response time and accommodates more users. Notable accomplishments include:

- "Soft closes" implemented early in the Fiscal Year update the Financial Management System with information from Accounts Payable and Labor Distribution and Reporting Systems. It provides the Financial System with biweekly labor transactions and labor resource adjustments. As part of the process, certain indirect costs are allocated more timely improving financial information and monthly closing ease.
- PC-based banking software interface with the Travel Disbursement Program was installed to enable direct deposit payment to travelers.

Other significant updates and improvements were made to travel, asset management and electronic vendor payments. Financial Management collaborated with Information Systems and Services to evaluate and test systems in preparation for Year 2000 (Y2K). All systems are asserted to be Y2K compliant.

Performance Rating (Adjectival)**: Outstanding**	96.00%

Criteria: 2.2 Transaction Processing Improvements

Reduce cycle times and/or costs while improving quality and accuracy for the processes identified. **(Weight = 13%)**

Performance Measure: 2.2.a Demonstration of Improvement

Evaluation of improvement trends for processes selected for improvement towards best practices as compared with benchmarking information. Showcase areas of excellence. **(Weight = 13%)**

Assumptions:

The Laboratory's finance and budget organizations will conduct benchmarking studies every two years. The Laboratory will analyze the benchmarking results and select processes to be measured and improved prior to the next benchmarking study. The Laboratory will present its study findings and areas selected for improvement to its DOE customer for concurrence. Additional improvement processes may be selected in conjunction with the DOE. The Laboratory will also use the benchmarking information to select and demonstrate areas of excellence to feature in its self-assessment. The selected processes will be measured and featured in the annual self-assessments during the two years between benchmarking studies. Where necessary and appropriate, benchmarking measures will be augmented with qualitative information and other performance indicators for the selected processes.

Performance Gradient:

Exhibit I provides the activities to be measured, performance ranges (gradients), and weight for each activity.

Exhibit I

LBNL Financial Management Subgauges – FY99

Measured Activities / Sub-Measures Activity/Support Processes		Gradient
2.2 TRANSACTION PROCESSING IMPROVEMENTS		
2.2.a DEMONSTRATION OF IMPROVEMENT		
2.2.a.1 Accounts Payable		
2.2.a.1.a Percentage of Discount Dollars Taken	Outstanding	89.90% or more
	Excellent	80.80% - 89.89%
	Good	71.70% - 80.79%
2.2.a.1.b Percentage of Vendor Payments Made According to Order Terms	Outstanding	90.00% or more
	Excellent	80.00% - 89.99%
	Good	70.0% - 79.99%
2.2.a.1.c Cost per Transaction (number of invoice lines)	Outstanding	$5.50 or less
	Excellent	$6.40 - $5.51
	Good	$7.30 - $6.41
2.2.a.2 Payroll		
2.2.a.2.a Cost Per Payroll Check or Notice Issued	Outstanding	$5.00 or less
	Excellent	$5.60 - $5.01
	Good	$6.20 - $5.61
2.2.a.2.b Percentage of Employees Utilizing Electronic Deposit	Outstanding	86.9% or more
	Excellent	81.9% - 86.8%
	Good	76.9% - 81.8%
2.2.a.3 Travel		
2.2.a.3.a Percentage of Travel Claims Processed Within Seven Days	Outstanding	95.00% or more
	Excellent	91.90% - 94.99%
	Good	88.80% - 91.89%
2.2.a.3.b Unit Cost Per Travel Claim Processed	Outstanding	$26.80 or less
	Excellent	$29.90 - $26.81
	Good	$33.00 - $29.91
2.2.a.4 General Accounting		
2.2.a.4.a Number of Days to Close Ledger	Outstanding	2.53 or less
	Excellent	4.03 - 2.54
	Good	5.53 - 4.04

Performance Narrative:

Performance in this section is evaluated according to a gauge model with pre-established scores agreed to by the Laboratory and DOE. Scoring ranges were established considering comparative industry benchmarks and past performance. Results support the conclusion that LBNL has sustained an outstanding level of operational effectiveness and efficiency. Seven of the eight sub-measures scored outstanding at gauge mid-point or better.

2.2.a.1 Accounts Payable

2.2.a.1.a	Percentage of Discount Dollars Taken	Outstanding	89.90% or more
		Excellent	80.80% - 89.89%
		Good	71.70% -80.79%

This is a gauge measure of the level of invoice discounts taken. Over 95% of the total dollar value discounts available on accounts payable invoices were taken, earning a gauged rating of **outstanding** on this element.

2.2.a.1.b	Percentage of Vendor Payments Made According to Order Terms	Outstanding	90.00% or more
		Excellent	80.00% - 89.99%
		Good	70.0% -79.99%

This is a gauge measure of on-time payment performance. Over 97% of vendor payments were made within the prescribed time period per order terms, earning a gauge rating of also 97% or **outstanding** on this element.

2.2.a.1.c	Cost per Transaction (number of invoice lines)	Outstanding	$5.50 or less
		Excellent	$6.40 - $5.51
		Good	$7.30 - $6.41

This is a gauge measure of the cost of processing accounts payable invoices. 1998 IMA Benchmarking criteria are used. The cumulative average cost per invoice line was $5.06 for a rating of 94% or **outstanding** for this element.

2.2.a.2 Payroll

2.2.a.2.a	Cost Per Payroll Check or Notice Issued	Outstanding	$5.00 or less
		Excellent	$5.60 - $5.01
		Good	$6.20 - $5.61

This is a gauge measure of the cost of payroll processing. 1998 IMA Benchmarking criteria are used. The average administrative cost of payroll checks or notice issued was $4.51 for a rating of **outstanding** for this element.

2.2.a.2.b	Percentage of Employees Utilizing Electronic Deposit	Outstanding	86.9% or more
		Excellent	81.9% - 86.8%
		Good	76.9% - 81.8%

This is a gauge measure of the percentage of employees utilizing electronic direct deposit for payroll. The cumulative average was 88.36% or **outstanding** rating on this element.

2.2.a.3 Travel

2.2.a.3.a	Percentage of Travel Claims Processed Within Seven Days	Outstanding	95.00% or more
		Excellent	91.90% - 94.99%
		Good	88.80% - 91.89%

This is a gauge measure of the average time to process and pay an employee travel claim. 99.48% of claims were processed within seven days for an **outstanding** rating on this element.

2.2.a.3.b	Unit Cost Per Travel Claim Processed	Outstanding	$26.80 or less
		Excellent	$29.90 - $26.81
		Good	$33.00 - $29.91

This is a gauged measure of the average unit cost of processing a travel claim. 1998 IMA Benchmark criteria are used. The average cost per claim was $26.85 or **excellent** rating on this element.

2.2.a.4.a	**General Accounting**	Outstanding	2.53 or less
2.2.a.4.a	Number of Days to Close Ledger	Excellent	4.03 - 2.54
		Good	5.53 - 4.04

This is a gauged measure of the average number of days required to close the General Ledger each month (cycle). 1998 IMA Benchmarking criteria are used. The average is two days or **outstanding** on this element.

Performance Rating (Adjectival)**: Outstanding**	95.00%

Performance Objective: #3 Financial Stewardship and Integrity

Financial Management's practices provide for financial stewardship, including compliance and data integrity. **(Weight = 40%)**

Criteria: 3.1 Costs and Commitments are Managed Properly

Ensure that all costs and commitments are within DOE-authorized funding levels and that costs and commitments expected to be in excess of such levels are properly reported and recorded. **(Weight = 10%)**

Performance Measure: 3.1.a Costs and Commitments are Controlled to Appropriate Funding Levels

Effectiveness of the Laboratory to control costs to B&R Level 9 and control costs plus commitments within authorized major funding levels (Obligation Control Level). **(Weight = 5%)**

Assumptions:

"Within funding levels" defined as within identified funding in the contract modifications.

"Commitments" are defined as uncosted balances under contracts awarded by the Laboratory that are set aside or encumbered, including purchase orders issued; contracts and subcontracts awarded, including the full liability under lease purchases and capital leases; termination cost for incrementally funded firm fixed price contracts, operating lease agreements, and multi-year service contracts that contain termination clauses; and other agreements for the acquisition of goods and services not yet received and uncosted balances related to other integrated M&O contractor liabilities.

Meeting the objective of this performance measure is applicable only at year end for Construction, Operating, and Capital Equipment funds. Line item capital equipment and construction is applicable monthly. A narrative will be written to describe the Laboratory's performance relative to this measure. The narrative will identify the number of Obligation Control Level (OCL), B&R Level 9, line item capital equipment, and construction funding categories being measured.

Performance Gradient:

A Good rating is achieved by staying within funding levels as defined above.

Factors that will be considered for a higher rating include:

- other proactive activities that improve the effectiveness of the Laboratory to manage and control funds
- controlling costs within funding levels identified in the contract modification for each accounting period

An Excellent rating is achieved by demonstrating a sound, systematic method for managing and controlling expenditures and commitments against funding levels with clear evidence of refinement and improved integration.

An Outstanding rating is achieved by demonstrating a sound, systematic method for managing and controlling expenditures and commitments against funding levels with a very-strong, fact-based improvement process and strong refinement and integration.

Performance Narrative:

LBNL met the objectives for this performance measure by maintaining costs and commitments within all authorized funding levels (ECOR) and having processes in place to monitor and control costs. However, at the B&R level 9, LBNL overcosted one B&R (WN65) at yearend. Since this is an absolute measure, LBNL can only attain a marginal rating. This event represents less than .03% of all its B&R level 9, or only $26.5K from a budget of $258M. LBNL acknowledged concern with WFO B&Rs and attributed the incident to staff turnover and the lack of WFO specialists.

Despite this single event, LBNL does take proactive steps to improve funds control. Adding its B&R Status Report on the Web for easy access to current financial information is an example. Improving the effectiveness of the Laboratory's ability to manage and control funds is important and benefits all administrators at the Laboratory, especially the Budget Division and the Divisional Resource Managers. LBNL continues to hold the annual Budget Workshop to provide training on the Federal budget process, the DOE funding process and cost estimating and control.

Since the performance measure clearly states that if, at year-end, a violation of costs plus commitments occurs at the B&R Level 9, then LBNL should receive a "marginal" rating. DOE OAK acknowledges that LBNL did not violate the Obligation Control Level, and the Laboratory continues to implement proactive activities to more effectively manage and control funds. For this reason, LBNL receives a high score within the **marginal** rating.

Performance Rating (Adjectival)**: Marginal**	69.00%

Performance Measure: 3.1.b Control of Funds

Evaluation of proactive activities designed for control of funds. **(Weight = 5%)**

Assumptions:

Narrative describing initiatives.

Performance Gradient:

A Good rating is achieved by implementing an effective process for mitigating administrative control of funds violations

Factors that will be considered for a higher rating include:

- process improvements
- control improvements and enhancements
- timely notification to DOE of significant changes in projected year-end uncosted balances

An Excellent rating is achieved by demonstrating a sound, systematic method for managing and controlling expenditures against funding levels and administrative control levels with clear evidence of refinement and improved integration.

An Outstanding rating is achieved by demonstrating a sound, systematic method for managing and controlling expenditures against funding levels and administrative control levels with a very-strong, fact-based improvement process and strong refinement and integration.

Performance Narrative:

LBNL exceeds the objectives of this performance measure by demonstrating they have a process in place to avoid funds control violations. Some of the initiative and controls initiated include monthly reviews of projected uncosted balances, budget staff follow-up meeting on funding issues, and running a preliminary general ledger to resolve potential problem issues.

The enhanced Financial Management System (FMS) has proven to be a powerful tool for the divisions and the CFO's Office to use in identifying financial information and resolving funding issues.

LBNL was proactive in implementing the Project Management Tracking System (PMTS). This will enable an automated budget formulation system that will calculate and generate Field Work Proposals (FWP), which can be maintained in a local database. As they continue to improve their training and

development program, resource administrators become more efficient managers of project funds. Enhanced FMS systems and updated reports lead to better project decisions and cost control.

The B&R Status report has been improved to include all funding types and to show monthly liens so that costs and commitments are monitored. It was added to the Web for easier access by the larger Laboratory community. With this new tool, Budget is better able to assist program administrators in control and management of their funds.

LBNL continues its awareness training with the Budget Workshop, Finance Forum, on line Cost Accounting Standards Cookbook, and individual training. Such process enhancements provide more effective and timely information, increased training in resource management, and improved communication with the program administrators all reflect excellence under this measure.

Performance Rating (Adjectival)**: Excellent**	88.00%

Criteria: 3.2 Financial Management Practices

Ensure that financial management and reporting practices fully disclose the results of operations and contain accurate, useful, timely information for program and fiscal management needs.

(Weight = 15%)

Performance Measure: 3.2.a Financial Policies, Practices, Data, and Reports

Evaluation of the level to which the Laboratory's financial policies, practices, data, and reports comply with applicable DOE requirements. **(Weight = 15%)**

Assumptions:

Provide a narrative description of the effectiveness of financial management practices performed to better manage DOE's requirements with primary emphasis on accounts or reports identified by the Laboratory and DOE as high risk. The Laboratory and DOE will identify the high risk accounts or reports by October 1 of each fiscal year. As issues emerge during the year, additional accounts or reports may be jointly defined as necessary.

Performance Gradient:

A Good rating is achieved by demonstrated incremental improvement in financial management practices of the high risk areas to ensure that financial practices, policies, data, and reports are consistent with DOE requirements.

Factors that will be considered for a higher rating include:

- results of Government Management Reform Act (GMRA) audited financial statements
- results of Cost Accounting Standards (CAS) Disclosure Statement reviews/revisions
- significant improvement in the financial practices of high risk accounts or processes
- improvement in the financial practices of other low risk accounts while maintaining good practices for high risk accounts
- proactive interaction with the DOE with respect to financial management matters
- successes in implementing new FASAB Standards, and DOE accounting and reporting requirements

An Excellent rating is achieved by demonstrating a sound, systematic method for managing professional and regulatory financial information standards with clear evidence of refinement and improved integration.

An Outstanding rating is achieved by demonstrating a sound, systematic method for managing professional and regulatory financial information standards with a very-strong, fact-based improvement process and strong refinement and integration.

Performance Narrative:

Financial Management Practices: Management of Accounts Receivable and Use of UC Bridge Funding The two areas under this measure, management of accounts receivable and use of UC bridge funding to cover funding lapses, were gauged. These measures address risk assessment, control environment improvements, and operating efficiencies. Results indicate the laboratory maintained or improved financial practices in these categories.

3.2.a.1 Accounts Receivable

3.2.a.1.a Reduction of Accts Receivable Exceeding 180 Days Delinquent		Federal ($M)
	Outstanding	$.0500 or less
	Excellent	$.0550 - $.0501
	Good	$.0600 - $.0551
		Non-Federal ($M)
	Outstanding	$.0400 or less
	Excellent	$.0450 - $.0401
	Good	$.0500 - $.0451

This is a gauge measure of the reduction in delinquent accounts receivable more than 180 days for Federal and Non-federal accounts. Each $.5K increase in delinquent accounts receivable reduces the rating 1 point. The 9/30/99 aging report submitted to OAK shows no balances greater than 180 days past due. Net balances in this category, which were over collected at September 30, were lower than at September 30, 1998 when Federal oustanding for more than 180 days was $109K and non-Federal $23K.

3.2.a.1.b Collection Rate Improvement		1 -30 Days
	Outstanding	47.30% or more
	Excellent	45.30% - 47.29%
	Good	42.30% - 45.29%
		31 - 60 Days
	Outstanding	68.80% or more
	Excellent	66.80% - 68.79%
	Good	63.80% - 66.79%
		61 - 90 Days
	Outstanding	83.80% or more
	Excellent	81.80% - 83.79%
	Good	78.80% - 81.79%
		91 - 120 Days
	Outstanding	88.80% or more
	Excellent	86.80% - 88.79%
	Good	83.80% - 86.79%
		121 - 180 Days

	Outstanding	98.80% or more
	Excellent	96.80% - 98.79%
	Good	93.80% - 96.79%

This is a gauge measure of collection rate improvement in each of five aging classifications. The 9/30/99 supplemental data reports the following cumulative percent collected by age group. One to30 days is 69.93% or **outstanding**; 31-60 days is 85.46% or **outstanding**; 61-90 is 93.03% or **outstanding**; 91 to 120 days is 95.51% or **outstanding**; and 121 to 180 days is 97.51% or **excellent**.

3.2.a.2	**UC Bridge Funding**		Months
3.2.a.2.a	Average Duration of Projects Using UC Bridge Account	Outstanding	3.25 or less
		Excellent	4.25 - 3.26
		Good	5.25 - 4.26

This is a gauge measure of the average amount of time (months) UC "bridge funding" is required to finance a project. The 9/30/99 supplemental data reports the average duration is 2.69 months or **outstanding**.

3.2.a.2.b	Average Percent of UC Bridge Funding Compared to WFO Billing	Outstanding	1.91% or less
		Excellent	2.11% - 1.92%
		Good	2.31% - 2.12%

This is a gauge measure of the percent of projects requiring UC "bridge funding" compared to Total Work For Others billings. The 9/30/99 supplemental data reports a cumulative average of 0.84% or **outstanding**.

Cost Accounting Standards (CAS) Disclosure Statement: During FY 1999, LBNL revised Part IV, Indirect Cost, of its CAS disclosure Statement. The revisions reflected accounting practice changes approved by DOE OAK or other necessary disclosures not involving accounting practice changes. LBNL's revisions adequately described LBNL's cost accounting practices.

During the year, periodic liaison meetings were conducted between Financial Services/Cost Compliance and Analysis staff and DOE OAK Business Evaluation and Performance Division. Meetings were not always conducted monthly due to a Financial Services staff vacancy. However, a point of contact was designated to handle questions by electronic mail.

LBNL disclosed an error discovered in the computation of payroll burden rates for selected staff (i.e., Casual Employees, Visiting Postdoctoral Fellows, Students and Summer Faculty) that would adversely impact programs, primarily Work-for-Others. After discussion with DOE it was agreed that the full cost recovery rates for FY 1999 should be charged. During our validation effort, LBNL indicated the appropriate full cost recovery payroll burden rates were charged retroactive to the beginning of the year.

LBNL is continuing to look for ways to refine and streamline its cost distribution practices. Potential changes are discussed during liaison meetings. The Laboratory recognizes further analysis and consideration of impacts are necessary.

The Laboratory continues to make CAS practices available electronically and train employees. LBNL Financial Services did not describe in its self-assessment what it does on a consistent/systematic basis to test and document that actual practices are consistent with disclosed practices. During our on-site validation LBNL discussed some steps taken to assist in CAS compliance. In FY 2000, LBNL could

enhance this performance area by describing the methodology used to determine the level of CAS compliance of actual practices across the Laboratory.

New Financial Standards and Special Data: As a part of the DOE integrated financial structure, LBNL Finance organization is required to gather and analyze financial information, prepare reports, and support DOE implementation of new Federal Government Accounting Standards. The Laboratory is often called upon to provide additional information necessary to prepare agency annual financial statements and assist in responding to issues arising from the annual financial statement audit. In the past two years, DOE adopted new financial standards, including: Managerial Cost Accounting, Deferred Maintenance, Non-Federal Property, Heritage Assets and Investment in Human Capital, and Forgone Revenue.

Implementation of Managerial Cost Standard required the Laboratory to allocate and report its yearly costs according to a scheme, which allocates operating costs to research activities under four primary business lines. The Laboratory created separate data files that met DOE needs. Criteria and procedures in this annual task change somewhat from year to year. Laboratory staff is responsive and appropriately modify their procedures as necessary to satisfy the requirements.

Beginning in 1998, DOE also required evaluation and reporting of information concerning the maintenance condition of property. In response the Laboratory Facilities Department implemented a plant inspection program to collect and record data in DOE's Facilities Information Management System (FIMS). General Accounting prepares the necessary annual reports.

Two other standards, Non-Federal Property, Heritage Assets and Investment in Human Capital and Foregone Revenues are also required on an annual basis. Although the Laboratory reported no qualifying activity in these categories (per DOE established thresholds), DOE OAK believes the Laboratory satisfactorily performs appropriate and necessary analyses to support that determination.

Functional Support Cost is another DOE requirement to classify and report Laboratory costs according to major business lines rather than categories established by budgets and accumulated in the accounting system. Comparative Functional Cost reporting is required since 1995, however the classifications and guidelines change. The Financial Management Systems Improvement Council and DOE issue guidelines for the report. The Laboratory participated in a peer review to restructure and streamline the Functional Support Costs Report. After the report was restructured, the Laboratory restated prior years and prepared the FY 1999 report.

Other Improvements In Low or High Risk Financial Accounts & Practices: CFO effort to minimize costs placed in suspense and creation of reconciliation reports to track and resolve suspense items results in better project and financial management information. Improved procedures and coordination between feeder systems and the general ledger reduce the posting of unassigned charges to suspense and thereby facilitates faster account and cycle closings.

In FY 1999, LBNL successfully implemented new DOE accounting and reporting requirements that affix work order detail (funding authorization numbers) to MARS WFO data, and new identification codes on accounts receivable and payable with other Federal Agencies. These actions augment management of WFO, and facilitate preparation and reconciliation of government-wide financial statements under the GMRA Act. Ahead of DOE itself, the CFO is already making use of the Federal Standardized General Ledger (SGL) accounts at a transaction level.

Other 1999 process improvements include: expanded use of Electronic Data Interchange for payment of invoices for larger vendors, collaborating with Information Systems and Services to set up and test electronic fund preliminary procedures for future implementation and use; regular reconciliation of purchase card subsidiary records and associated statements is an internal control improvement. The reconciliation made all records and accounts current as of FY 1999. The CFO reports another major effort is underway to reconcile accounts payable subsidiary records to the general ledger. This is important for data integrity, systems reliability, and ultimately, customer confidence in financial data and reports.

Ensuring agreement of the Laboratory's subsidiary records to the general ledger and between LBNL's general ledger and DOE's Management Analysis and Reporting System (MARS) is extremely important since reliance upon detailed records of integrated Management and Operating contractors provides the fundamental source of support to explain and report annual operations and financial statements. The CFO continues to be very responsive and supportive to DOE OAK in this regard.

Performance Rating (Adjectival)**: Outstanding**	92.00%

Criteria: 3.3 Effective Internal Controls and Compliance

Provide for effective internal controls and ensure timely and effective resolution of identified weaknesses. **(Weight = 15%)**

Performance Measure: 3.3.a Internal Controls and Compliance Process Management

Degree to which an effective system for identifying, reviewing, and correcting (if identified) financial management internal control and compliance processes is maintained. (**Weight = 15%)**

Assumptions:

Describe and self-assess the internal controls and financial management techniques employed to minimize and mitigate risks for the major financial management processes identified in conjunction with DOE. The Laboratory and DOE will identify areas for self-assessment by October 1 of each year. As issues emerge during the year, additional self-assessment topics may be jointly defined as necessary. To avoid duplication, the finance organization will either self-assess or rely on recent internal or external audits, reviews, or assessments of relevant activities.

Performance Gradient:

A Good rating is achieved by accurately describing well designed and well deployed systems/processes for managing internal controls and compliance concerns/ weaknesses.

Factors that will be considered for a higher rating include:

- a risk prioritization system that demonstrates Laboratory focus on high risk financial management control/compliance areas
- prompt completion of corrective actions
- process improvements
- aggressiveness of corrective action schedules
- effective process for identifying with DOE, annual target areas
- proactive leadership in addressing and correcting internal and external audit findings and concerns related to financial management practices

An Excellent rating is achieved by demonstrating a sound, systematic method for managing professional and regulatory financial risks with clear evidence of refinement and improved integration.

An Outstanding rating is achieved by demonstrating a sound, systematic method for managing professional and regulatory financial risks with a very-strong, fact-based improvement process and strong refinement and integration.

Performance Narrative:

LBNL Financial Services Department and DOE OAK identified four areas LBNL would self-assess during FY 1999. DOE OAK comments on the selected areas follow:

1. Space Recharge: LBNL was to describe and assess its financial management policies and practices for determining an equitable final allocation of space recharge costs to cost objectives (i.e., DOE research, Work for Others, Organization Burden, LDRD, UCDRD, etc.). LBNL's self-assessment indicated the financial management policies and practices for determining the equitable allocation of space costs are identified in the LBNL Space Management Policy, which is part of the Regulations and Procedures Manual (RPM). However, LBNL indicated it needs to be augmented to more clearly define the process of determining recharge costs associated with space allocation. The self-assessment report or supporting documentation did not provide the methodologies used to assign/allocate space to final cost objectives and discuss the assessment of whether the methods used result in an equitable allocation to cost objectives. DOE OAK requested during a validation review that LBNL present some summary level data on how space costs were allocated in FY 1999 by division and by cost objective (i.e., DOE research, Work for Others, Organization Burden, LDRD, UCDRD, etc.) along with the corresponding labor costs. DOE OAK wanted an overall indicator of how space costs are being allocated in relation to how labor costs are being allocated at a summary level. LBNL indicated additional time would be required to perform this query and analysis. During the on-site validation effort, LBNL Financial Services staff performed a query of FY 1999 space cost by division, by project type and compared the labor costs to space costs. LBNL Financial Services staff indicated its high level analysis suggests that there are areas at LBNL that need to be looked at further in terms of how space costs are allocated to final cost objectives. The analysis did suggest that LBNL couldn't conclude that space costs are being equitably distributed to final cost objectives. Accordingly, LBNL indicated the next step during FY 2000 is to develop an action plan and get a better understanding of the relative impact of the current practice.

2. Labor Distribution/Effort System: LBNL Internal Audit Services was to determine the adequacy and effectiveness of internal controls over the Labor Distribution and Reporting System. The draft internal audit report received during our validation effort reached an overall conclusion that the Labor Distribution and Reporting System (LDRS) accurately and reliably allocates labor costs to projects. However, the Laboratory Employee Time-Reporting System (LETS) supporting the Labor Distribution System needed stronger controls to assure timely online hours approval, and needed system improvements to eliminate the manual process for late approval of payroll hours. Human Resources and Information Systems have responsibility for LDRS and LETS. These organizations are not part of the Financial Services organization. The report did indicate that Financial Services is responsible for periodic reviews of time-reporting documents for compliance. The LBNL Financial Services self-assessment indicated the CFO's Office periodically reviews the LETS time reporting documents for compliance and reconciles monthly labor charges. Reconciliation differences are referred to HR/ISS for resolution. During a validation effort, Financial Services staff indicated they perform a monthly reconciliation of the Labor Distribution Accrual. The reconciliations performed had nominal differences.

3. Bank Reconciliation: LBNL did assess whether the bank charges conform to the tri-party banking agreement, as part of the review of the schedule of authorized charges during FY 1999. DOE OAK concluded that LBNL did not pay any unauthorized charges even though LBNL had been billed for such charges. The bank reconciliation provided a better understanding of services and charges. The schedule of bank services and charges was updated and the bank properly paid.

4. Conference Accounting: LBNL was to assess local policy and processes used to segregate revenues and account for allowable vs. unallowable conference costs. LBNL's self-assessment reiterated its policy and procedures that had previously been certified as completed by DOE OAK Finance Division and in effect since June 1, 1997. During validation DOE OAK wanted to gain assurance that procedures were being implemented as described by sampling selected actual conferences accounts. LBNL established a bank account independent of the DOE letter of credit account for all deposits and disbursements related to conference activity. DOE OAK conducted interviews with the LBNL's Conference Planning and General Accounting staff responsible for implementing the procedures. Based on a walk through of selected conferences, validation confirmed that LBNL is complying with conference accounting procedures that were responsive to the Office of Inspector General recommendations.

Risk Prioritization System: LBNL's Financial Management Risk Prioritization System is a formal process that examines selected financial functions to determine the risk and exposure of LBNL's financial assets. Specific functions and processes within General Accounting and Accounts Payable were categorized and rated according to the level of risk associated with each function. The functional manager submits a monthly analysis and verification statement to the CFO, rating each item according to its risk exposure (high, medium, or low). DOE OAK reviewed the monthly analysis prepared by functional managers and reviewed by the CFO. DOE OAK noted that those processes that required additional effort to reduce financial risk exposure were highlighted and tracked through this monthly process. DOE OAK noted that Budget, Cost Accounting and Compliance (part of the CFO organization), unlike other sites, do not participate in the Risk Prioritization System.

Prompt Completion of Corrective Actions: LBNL's self-assessment described detail corrective actions taken as a result of reconciliation of the Accounts Payable Subsidiary Ledger and the General Ledger not being current. When the causes of the major differences were identified, LBNL's CFO discussed the findings and corrective action plan with Laboratory management, Internal Audit and DOE OAK. All necessary adjustments were made.

Process Improvements: Accounts Payable developed an invoice management report designed to determine the age of unpaid invoices. The result was a dramatic decrease in the dollar amounts payable to vendors with invoices of 90 days or older. Over a one-year period, to May1999, the balance over 90 days dropped from approximately 15 percent to less than 3 percent of the total payable amount.

Proactive Leadership in Addressing and Correcting Internal and External Audit Findings and Concerns Related to Financial Management Practices: LBNL endeavors to address and promptly correct audit findings and issues related to financial management practices. Audit corrective actions were monitored through the Corrective Action matrix. During validation, DOE OAK was provided with the Financial Management Corrective Actions Tracker through June 1999. The tracker didn't list the status of issues warranting actions by LBNL such as Related Party Transactions and Honorarium Payments. Lack of these items being tracked in a fully integrated reporting system caused some internal confusion and delay with respect to resolving these matters satisfactory. In part, this is

attributed to personnel turnover, impacting continuity and necessary rework. During validation, LBNL indicated it (i) will take the necessary action to revise its policy on the payment of honorarium to Government employees and (ii) understands DOE expectations with respect to providing a year-end annual report that identifies and summarizes the universe of "inflow and outflow" of related party transactions.

Performance Rating (Adjectival)**: Excellent**	85.00%

Performance Objective: 4.0 Learning and Growth

Managing the work force in a manner that ensures personnel are qualified and effective.

(Weight = 15%)

Criteria: 4.1 Work Force Management

Develop and maintain an effective Financial Management work force. **(Weight = 15%)**

Performance Measure: 4.1.a Effective Work Force Management

Evaluation of Financial Management organization and processes resulting in an effective work force. **(Weight = 15%)**

Assumptions:

Narrative that describes the Financial Management organization structure, work force development plans, training activities within the Financial Management organization, employee satisfaction, staffing and skills mix plans, strategic planning, and other activities resulting in improving the work force.

Performance Gradient:

A Good rating is achieved by establishing and maintaining a systematic approach to effective Financial work force management.

Factors that will be considered for a higher rating include:

- merging of related functions
- training and development activities of non-financial organizations and other institution-wide initiatives
- major cost and staffing reductions not negatively effecting performance

An Excellent rating is achieved by demonstrating a sound, systematic method for effectively managing the Financial work force with clear evidence of refinement and improved integration.

An Outstanding rating is achieved by demonstrating a sound, systematic method for effectively managing the Financial work force with a very-strong, fact-based improvement process and strong refinement and integration.

Performance Narrative:

Organization Structure: The CFO's Office is comprised of Accounts Payable, Budget, Cost Accounting and Compliance, and General Accounting. The office consists of 35 employees, of which 57 percent have college degrees. Job postings and hiring requirements are based on minimum levels of required skills, education and experience for each position. The headcount for FY 1999 was 35 employees, which represents a 26 percent reduction from 47 employees in FY 1994. Since 1994, the CFO's Office costs as a percentage of total LBNL costs decreased from .93 percent to .70 percent.

Work Force Development Plan: While the CFO's Office doesn't have a formal, written work force development plan, its self-assessment described strategies being promoted. Work force development objectives include:

- Hiring a highly skilled and motivated work force
- Continuing education and training opportunities for employees
- Employee career development as part of the annual performance evaluation
- Whenever possible, employee advancement by promoting within the organization
- Striving for continuous improvement in products, processes, and services

Training Activities within the Financial Management Organization: Employees have the opportunity to attend internal training in FMS, which include courses in:

- Resource Adjustments
- Project Setup
- Query

A Financial Policies and Training Working Group was commissioned in November 1998 by management in the CFO's Office and the Administrative Services Division to develop a financial training program for new financial management staff members. The proposed training program is currently being reviewed by Laboratory management and if approved will include numerous courses in accounting, budgeting, and costing. LBNL is working with LLNL to adopt their on-line financial management training program.

Employee Satisfaction: Employee recognition through Spot Awards and Outstanding Performance Awards are important in maintaining a high level of motivation and satisfaction within the organization. During FY 1999 eight employees received awards. LBNL's self-assessment did not describe a structured approach to measure employee satisfaction and trends.

Staffing and Skill Mix: LBNL's self-assessment did not identify current or address projected employee skill mix concerns.

Strategic Planning: While the CFO's Office doesn't have a formal, written strategic plan, its self-assessment report indicated a strategic plan to consolidate financial services (and other departments in the Administrative Services Division) into one building helped to create an environment of teamwork

and unity within the organization. In addition, the self-assessment indicated the organization is transitioning from providing assistance in transaction processing to decision support. LBNL began a training program that reviewed the methods of coaching, leading, and managing change in the organization to build a high performance team environment.

Other Work Force Improvement Activities: Individual employee career development plans were reviewed as part of performance evaluations. Several employees in the CFO's Office were promoted from within. Staff members have the opportunity to cross train in several functional areas thereby enhancing the development of each employee and strengthening the organization.

Management training was encouraged to improve the quality of leadership within the organization. Unit Managers took courses to enhance their skills in operational management and supervision.

All employees within the CFO's organization were required to attend a special customer service seminar, "How to Give Exceptional Customer Service." The seminar was adapted to the Laboratory environment.

Merging of Related Functions: The process of accounting for and paying Sales and Use Tax was moved to Accounts Payable from Cost Accounting and Compliance. The production of the Plant and Capital Equipment Report was combined with the B&R Status Report due to loss of a staff analyst.

Non-Financial Organizations Training and Development Activities and Other Institution-wide Initiatives: Financial Management System classes are offered on a continuous basis to all employees. Internal training in FMS includes courses in:

- Resource Adjustments
- Project Setup
- Query

Major Cost and Staffing Reductions Not Negatively Affecting Performance: Each unit of the CFO's Office experienced staff reductions. However, technology improvements, cross training, and effective management enabled the organization to streamline functional areas, become more productive, and provide high quality products and services.

Performance Rating (Adjectival)**: Outstanding**	91.00%

Performance Area: HUMAN RESOURCES

Performance Objective: #1 Cost Effectiveness

The Laboratory will strive to achieve cost effective HR systems and practices. **(Weight = 32%)**

Criteria: 1.1 Review and Evaluation of HR Systems and Processes

HR systems and processes are reviewed and evaluated in order to optimize the delivery of services with respect to quality and cost. **(Weight = 11%)**

Performance Measure: 1.1.a Evaluation of HR Systems and Processes

Evaluate HR systems and process improvements and associated results. **(Weight = 11%)**

Agreement:

The Laboratory will use a variety of techniques that may include internal customer feedback mechanisms, cost benefit analysis, work flow analysis, process mapping, benchmarking, etc., to streamline, reengineer, outsource, or eliminate existing systems and processes or implement new initiatives.

Performance Gradient:

Unsatisfactory: Little or no effort has been demonstrated towards achievement of the performance measure.

Marginal: Some effort is demonstrated however results fall short of the expectations for the "good" gradient.

Good: As a result of reengineering or HR initiated actions, improvements are achieved to streamline, outsource, enhance, or eliminate one major HR system or process.

Excellent: As a result of reengineering or HR initiated actions, improvements are achieved to streamline, outsource, enhance, or eliminate two major HR systems or processes.

Outstanding: In addition to re-engineering, enhancing or eliminating two major HR systems or processes, or through other HR initiated actions, an improvement in quality or cost is achieved.

Performance Narrative:

Since FY 1997, this performance measure has been established to provide the Laboratory with the opportunity to exhibit its initiative in improving its human resources systems and processes. For FY 1999, four systems or processes were described to illustrate activities which demonstrate such initiative – Recruitment process/Restrac Implementation, Guest and Contract Labor Processes, Salary Administration, and the H1B Visa process.

Expectations under this measure are that the Laboratory will demonstrate the means by which systems/processes were analyzed, and the actions taken as a result in order to ultimately achieve greater efficiency. The description of the Recruitment/Restrac improvements cites as the impetus for change the non-compliance of Resumix with Y2K requirements. Given this, end-user feedback was obtained to assess available products, which resulted in the selection of Restrac. As a result of its implementation, data on job openings, applicants, interviewees, recruitment sources, and hires are now maintained in one database and the necessity for double-entry of new-hire actions has been eliminated. In addition, the implementation of Restrac led to the review of the entire recruitment process, in order to re-engineer it for compatibility with Restrac. The techniques utilized in reviewing the recruitment process were not addressed; however, development of a definition of "applicant" was identified for as the basis for achieving effective streamlining. This led to LBNL's ability to conduct skill-based searches in the field, which in turn, has enabled the entire Selection/Recruitment function to be performed in the field. It should be noted that, although these revisions have resulted in a more streamlined system, they also resulted in the necessity for the Field to increase by 4 FTE's in order to meet the new requirements. This, therefore, raises concern regarding the cost effectiveness of this change relative to its efficiency.

Regarding the Guest and Contract Labor processing, direct input from the Field and within the central Human Resources Department indicated the system for tracking and processing Guests and Contract Laborers was inefficient. Improvements were achieved as a result of an effort by end-users and Human Resources staff to re-design the process, forms and procedures required for Guests and Contract Laborers. As a result, the Field has been enabled to conduct all processing, and Human Resources was able to eliminate 2 FTE's devoted to this program. Also as a result of customer input, Human Resources was able to streamline the Field's utilization of the PeopleSoft Salary Administration Module by revising the "salary increase grid" into a format division managers could utilize in their salary increase meetings. This eliminated the necessity for the Field to download salary data onto an Excel spreadsheet, complete their data analysis, and data-enter the new salaries into PeopleSoft.

In FY 1999, Human Resources also decided to resolve long-standing issues regarding the accuracy and efficiency of its H1B visa process for non-immigrants. A group-leader was hired, a desk manual developed to document processing requirements, and a tracking system was established. As a result, the Laboratory's reliance on immigration attorneys has been reduced, the International Researchers and Scholars Office with Human Resources is able to accurately respond to inquiries, and visas are processed more efficiently and accurately.

LBNL's performance under this measure warrants an **excellent**. Improvements to the four systems described above were achieved, although there is some concern regarding the additional cost associated with the Field responsibility for recruitment.

Performance Rating (Adjectival)**: Excellent**	85.00%

Criteria: 1.2 Workforce Planning/Staffing

The Laboratory has an effective, integrated workforce planning system. **(Weight = 10%)**

Performance Measure: 1.2.a Workforce Planning

Evaluation of the effectiveness of the Laboratory's workforce planning system. **(Weight = 4%)**

Agreement:

HR will continue a process for partnering with the major programmatic division customers to develop Division staffing profiles and workforce planning fiscal year estimates.

This measure will consider development and implementation of workforce planning processes to identify workforce skill requirements and staffing strategies. Activities include:

- Assessment of current workforce composition.
- Analysis of future workforce requirements based on strategic plans, program guidance and budgets.
- Determination of future workforce composition, jobs, and competencies/skills to focus the recruiting program to yield most effective results. Shortages and excesses against current workforce composition are identified. The work force planning process has senior management review and oversight.

Performance Gradient:

Unsatisfactory: Little or no effort has been demonstrated towards achievement of the performance measure.

Marginal: Some effort is demonstrated however results fall short of the expectations for the "good" gradient.

Good: Workforce reviews incorporating activities identified above are conducted regularly; staffing and recruiting plans are updated to reflect changing needs.

Excellent: In addition, strategies are implemented to aid the Laboratory in resolving shortfalls and excesses between current and future work force composition and skill requirements.

Outstanding: In addition, development of workforce planning tools (such as implementation of skills database, etc.) and capabilities (such as expanded, integrated campus recruitment effort, assessment of supplemental labor cost effectiveness, etc.) for ongoing improvement.

Performance Narrative:

FY 1999 is the second year for measurement of LBNL's work force planning system. The expectation behind the measure is that the Laboratory will systematically analyze on a regular basis its work force composition against its current and future organizational needs.

The performance measure required evaluation of the "effectiveness" of the work force planning system, which, as specified by the Agreement would involve implementation of processes to: 1) assess current work force composition; 2) analyze future work force requirements; and 3) strategically focus recruitment. LBNL's self-assessment describes the work force planning process as tied to the budget process. Research divisions conduct work force planning in conjunction with the annual Field Task Proposal, which provides new or re-newed funding for research projects. Non-research divisions and departments participate in the Overhead budget call, in which supplies, expenses and labor costs are defined. "Projected plans" are finalized and monitored on a monthly basis and critical deviations in expenses or deviations require revisions, such as lay-offs. Although LBNL asserts this approach has been proven effective given the Lab's ability to close on budget each fiscal year, utilization of the budget process as work force planning falls short of the institutional approach expected through this measure given the lack of emphasis on skill requirements, demographics, market challenges and other factors that are generally weighed against funding availability.

The Human Resources Department's role is primarily to assist the Divisions/Departments upon request. Given the decentralized approach to recruitment at LBNL, Human Resources does not develop recruitment or staffing plans for its customers. During the appraisal period, however, Human Resources has participated in work force planning discussions with four LBNL organizations in an effort to improve its value to the process. The self-assessment describes the planning conducted by the organizations in order to meet work force needs. For example, General Sciences Division collaborated with its matrix organizations to establish a skills database for projects it will manage over the next two years. In addition, Engineering and General Sciences are developing recruitment strategies and mentoring programs in anticipation of a significant number of future retirements. Finally, the Technical Services Department is developing strategies to reduce its use of long-term supplemental labor while meeting its staffing needs for highly specialized skills. An example in which Human Resources played a direct role in support of the Lab's work force planning strategy was the Joint Genome Center. Through its ability to obtain UC's approval to negotiate staffing issues locally with UPTE, resolution was reached more expediently and staffing delays did not impact project implementation.

LBNL's performance under this measure warrants a rating of **good**. The process described as LBNL's approach to work force planning requires further development in order to integrate the additional elements necessary to attain effectiveness. Those elements appear to be utilized in pockets of the organization as evidenced by the examples of General Sciences, Engineering, and Technical Services Division.

Performance Rating (Adjectival)**: Good**	75.00%

Performance Measure: 1.2.b Staffing/Recruiting/Supplemental Workforce

Evaluation of the effectiveness of the Laboratory's system, policies, and procedures for the appropriate, cost effective management of recruiting programs, hiring processes, and supplemental labor workforce. **(Weight = 6%)**

Agreement:

The Laboratory will continue a critical review and analysis of supplemental labor usage, and monitor the effectiveness of the new supplemental labor policy:

- Acquisition and management of supplemental workforce are cost effective and address workforce planning requirements.

Performance Gradient:

Unsatisfactory: Little or no effort has been demonstrated towards achievement of the performance measure.

Marginal: Some effort is demonstrated however results fall short of the expectations for the "good" gradient.

Good: The usage of supplemental labor is systematically monitored. Quarterly reports are provided to management.

Excellent: Supplemental labor hires are systematically reviewed and monitored consistent with the new supplemental labor policy, and Workforce Planning strategies.

Outstanding: Evidence of forecasting the use of supplemental labor including cost projections and evaluation for cost effectiveness. (Same as FY 98).

Performance Narrative:

The intent of this measure is to determine the effectiveness of LBNL's efforts to reduce its use of supplemental labor. Emphasis is placed on the process utilized to monitor supplemental labor usage under its policy, "Guidelines for Use of Supplemental Labor Personnel", issued in April, 1999.

The self-assessment describes efforts made to improve the effectiveness of LBNL's supplemental labor program. A Supplemental Labor Administrator has been hired, and a reporting mechanism is in place to provide managers with data on supplemental labor costs, historical trends, and length of service. In order to ensure the assignments complied with policy Human Resources initiated a review into supplemental labor personnel assigned to the Lab over 12 consecutive months or 12 cumulative months within a 36 month period. A total of 57 assignments were found to exceed to policy. The self-assessment states, however, that this number has not been significantly reduced to date, primarily due

the need of a particular organization for fourth quarter construction projects. Human Resources is taking the opportunity; however, to become involved in work force planning by working with the organization to develop plans for reducing the numbers.

Other evidence that supplemental labor is integrated into work force planning is in the Technical Services Department (TSD). The organization was faced with the necessity to reduce long-term supplemental labor, yet required the specialized skills of the workers. Human Resources and TSD collaborated to develop a recruitment strategy to give first consideration to supplemental labor in filing vacancies within the organization. Of 24 employees hired, 15 were formally supplemental labor. The TSD organization has therefore reduced its supplemental labor usage from 30+ to 10-12.

Performance Rating (Adjectival)**: Excellent**	85.00%

Criteria: 1.3 Compensation

Compensation is administered in a cost competitive manner which takes into account market considerations and internal equity. **(Weight = 11%)**

Performance Measure: 1.3.a Cost Competitive Compensation

The Laboratory has a cost competitive compensation system which contributes to attracting and retaining a quality workforce. **(Weight = 6%)**

Agreement:

Human Resources will continue to identify additional market surveys to supplement existing surveys. Human Resources will continue to work closely with Division customers to ensure that jobs are being accurately matched to the surveys with a primary focus on jobs where recruitment and retention problems exist.

Performance Gradient:

Unsatisfactory: Little or no effort has been demonstrated towards achievement of the performance measure.

Marginal: Some effort is demonstrated however results fall short of the expectations for the "good" gradient.

Good: A narrative summary that documents Human Resources action to identify additional market surveys and demonstrates that jobs are being accurately matched to the surveys.

Excellent: Recommendations are developed and presented to management and Division customers as a result of the market survey analysis. Classification structures and job families are realigned as appropriate.

Outstanding: In addition to the above, CIP thoroughly addresses all of the elements specified in Appendix A and meets or exceeds the agreed upon time requirements.

Performance Narrative:

FY 1999 was the first year of this measure, in which LBNL was expected to critically assess the appropriateness of the surveys it utilized as well as its accuracy in matching jobs to surveys.

LBNL's self-assessment addresses the Lab's identification of issues regarding the accuracy of the market comparison to the Davis survey, and the validity of the surveys and job matches under the Computer Sciences, Engineering, Environmental Health and Safety, and Administrative Services areas. As a result of its efforts to address these issues, eight surveys are being considered as alternative or additional sources for market data.

Two efforts undertaken in FY 1999 to achieve accurate matching to surveys were the "Engineering Map Over" and the revised rate structure for the Electrical Engineering and Computer Science (EECS) Interns. For the Engineers, a separate job family was established to distinguish non-research engineers from Scientists and was priced against an engineering market. Concerning the interns, a comparison was made to the rates paid by competitor employers of EECS interns, and a new rate structure was developed to achieve alignment. This alleviated a potential exodus of dissatisfied interns in the program, which is utilized as a recruitment tool.

LBNL's performance under this measure warrants a rating of **excellent**. Surveys with potential for improving LBNL's comparison to market have been identified, and, as a result of market analyses, the Engineering and EECS Intern structures have been realigned to more accurately reflect their markets. Performance falls short of the outstanding gradient given the extent of issues identified through the Compensation Increase Plan approval process in FY 1999.

Performance Rating (Adjectival)**: Excellent**	85.00%

Performance Measure: 1.3.b Effectiveness of Implementation of Market-Based Pay Policy

Benchmark evaluation of the Laboratory's research and support FTE costs in like R&D facilities.

(Weight = 5%)

Agreement:

Benchmark evaluation of the Laboratory's research and support FTE costs in like R&D facilities.

1. "Research FTE" are defined as professional staff who are programmatically funded.
2. "Support FTE" are defined as technical and administrative staff who are funded from either overhead or programmatic funds.
3. Like R&D facilities" will be defined as multi-disciplinary research organizations with representation from both the public and private sectors as mutually agreed between DOE and the Laboratory.
4. "Career" (i.e. benefit accruing) vs. supplemental labor will be reported in separate graphs.
5. Data obtained in benchmarking analysis will be considered in the annual Appendix F Self-Assessment for the Laboratory Management functional area.

Performance Gradient:

Unsatisfactory: Little or no effort has been demonstrated towards achievement of the performance measure.

Marginal: Some effort is demonstrated however results fall short of the expectations for the "good" gradient.

Good: A comprehensive plan, milestones and schedule is in place which includes identification of comparators and job titles included in the research and support categories.

Excellent: Analysis will include sufficient sample size and mix and review the type of positions and functions in like R&D facilities that have been outsourced, performed by supplemental labor, performed by career FTE, performed by temporary FTE.

Outstanding: Plan is completed and results are analyzed and presented to Laboratory Management.

Performance Narrative:

LBNL's attempts to benchmark its research and support FTE's to similar R&D facilities began in FY 1998 with the identification of eight comparator organizations, which Human Resources expected to survey for the relevant data.

In FY 1999, however, LBNL decided not to pursue utilization of the survey. Instead, Human Resources attempted a comparison to the MacLachlan Laboratory Productivity Matrix. Results of the analysis found, however, that the data were inappropriate for meeting the requirements of this measure.

LBNL's performance under this measure is **marginal** given its unsuccessful attempts to date establish a means of comparison to like R&D facilities.

Performance Rating (Adjectival)**: Marginal**	65.00%

Performance Objective: #2 Work Force Excellence

The Laboratory will develop and motivate its work force to excel in meeting programmatic needs of the Laboratory and its customers. **(Weight = 16%)**

Criteria: 2.1 Performance Management

The Laboratory has an effective employee performance management system. **(Weight = 8%)**

Performance Measure: 2.1.a Implementation of Performance Management System

Evaluation of the system that ensures employees are appraised on an annual basis, against pre-established, job-related performance criteria and that they have current development plans that meet Laboratory guidelines. **(Weight = 8%)**

Agreement:

A formal policy and procedure is in place to document that all eligible career employees receive a performance appraisal (Performance Progress Review) on an annual basis, which is an input to the annual merit increase review. Human Resources will conduct and review a 5% random sample across all Divisions/Departments. The review will consider the following factors:

- Position description is in place and is appropriate to the job classification
- If an Individual Development Plan is required, it is in place.
- The overall rating is consistent with the narrative.
- The appraisal has been completed consistent with institutional guidelines.

Performance Gradient:

Based on an assumption of a 96% completion level:

Unsatisfactory: Little or no effort has been demonstrated towards achievement of the performance measure.

Marginal: Some effort is demonstrated however results fall short of the expectations for the "good" gradient.

Good: A 5% random sample, is completed per the agreements noted. Feedback is provided to line management.

Excellent: Based on the 5% random sample, analysis of the data is conducted for trends which may indicate poor business practices.

Outstanding: Based on the trend analysis, feedback is provided to line management and training or other remediation is provided as appropriate.

Performance Narrative:

Measurement of performance appraisal and Individual Development Plan (IDP) completion has occurred since FY 1994, previously through two separate measures, and, since FY 1998, under a combined measure. The intent of the measure was initially to ensure that the Laboratories implemented a systematic means of communicating performance expectations and feedback to employees, and were developing the skills of employees to meet future needs of the Labs. LBNL has institutionalized a system and has consistently achieved a completion rate exceeding 95 percent.

The "Agreement" to this measure clarifies that measurement will address utilization of a formal policy and procedure, and a 5 percent random sample will be reviewed against four specific factors. LBNL provided its "P2R Guidelines" as evidence of policy, and reviewed the 5 percent sample to ascertain the extent to which policy was followed. Each of the four factors achieved a completion rate of 87.2 percent or above. In addition, a rating scale of 1-3 was utilized to assess the quality of the appraisal package. This review revealed 86 percent of the sample rated 1, indicating that the required documents (position description, IDPs, and performance appraisal) were completed and the overall performance rating was "supported by well written reasoning and good development plans." Results of this review demonstrate an improvement over the review conducted for the FY 1998 self-assessment, most notably in the increase from 72 percent to 96.4 percent of appraisals containing development plans.

LBNL provided the following data from 1995-1999 as substantiation of its assertion that "LBNL does an effective job of measuring performance…"

	1995	**1996**	**1997**	**1998**	**1999**
Percentage Completed	97.0%	99.3%	98.0%	99.8%	98.2%
Position Description	99.0%	99.2%	100%	99.5%	90.2%
P2R Narrative Consistent w/ Rating	NA	100%	100%	99.5%	99.1%
P2R Meets Guidelines	89.0%	100%	85.0%	82.0%	87.2%
Development Plans	88.0%	100%	85.0%	72.0%	96.4%

The trends demonstrate that LBNL has remained constant in achieving consistency between narrative and rating. Greater fluctuation was evident in the extent to which the performance appraisals meet guidelines and, to a significant extent, in the inclusion of development plans. These areas have been a focus of increased training in FY 1999, which has resulted in increased percentage rates for FY 1999. The percentage of position descriptions included in performance packages remained consistently high

until FY 1999, when it dropped from 99.5 percent to 90.2 percent. This decrease has been identified as the focus of training for FY 2000.

Performance under this measure warrants a rating of **good**. The 5 percent sample was reviewed to determine the extent to which the four criteria were met, as well as against three qualitative standards. Feedback from FY 1998's review was provided to line management through training in FY 1999, and was identified as the means by which feedback for FY 1999's review would be communicated in FY 2000.

The performance falls short of the excellent gradient given its failure to discuss the extent to which good business management practices were reflected in the trend data. It appears the qualitative review, in which the 1-3 scale was applied to indicate how "well written" the appraisals were, was LBNL's effort to address this gradient. The rating definitions, however, lacked the specificity necessary to equate "well written" with "good business management practices."

It should be noted that OAK is concerned that the IDP completion rate may not be as high as the self-assessment states. OAK's independent validation of the IDP completion rate revealed that the LBNL reviewer credited any discussion of training or goals as an IDP, including those of only one or two sentences. OAK validated an increase in the quantity of acceptable IDP's but observed that the quality of the IDP's did not improve relative to what might be expected after the extensive training conducted in this area during FY 1999.

Performance Rating (Adjectival): **Good**	78.00%

Criteria: 2.2 Effectiveness of Employee/Labor Relations

The Laboratory has effective employee/labor relations programs. **(Weight = 8%)**

Performance Measure: 2.2.a Employee and Labor Relations

Evaluate the effectiveness of the Laboratory's approach in addressing employee and labor relations concerns. **(Weight = 8%)**

Agreements:

Data on Employee and Labor Relations issues and concerns that are both formal and informal will be summarized and reported to management on a regular basis. HR staff will review and evaluate the information collected to determine whether problem areas exist and whether proactive interventions are required. Interventions including supervisory and management training and corrective action will be developed and implemented as appropriate.

The Laboratory will trend formal complaints from employees by type of complaint and division/department, in order to identify problem areas in need of corrective action. If statistically significant, the lab will identify other demographic factors. Formal complaints include administrative reviews, grievances, formal mediation, litigation and external agency charges. In addition, for labor relations, formal complaints will also include unfair labor practice charges. It is acknowledged that formal complaints may result form multiple causes.

Performance Gradient:

Unsatisfactory: Little or no effort has been demonstrated towards achievement of the performance measure.

Marginal: Some effort is demonstrated however results fall short of the expectations for the "good" gradient.

Good: Summary and Trend data are collected in a formal manner and presented to management.

Excellent: The data will be analyzed for trends which may reflect problems, e.g., poor business practice, or liability exposure.

Outstanding: Based on the trend analysis, feedback is provided to line management and training or other remediation is provided as appropriate.

Performance Narrative:

The intent of this measure in FY 1999 is to evaluate the "approach" taken by LBNL in responding to employee and labor relations issues. Although trend data remains a focal point of the measure to ensure cases are tracked and issues identified, the measure has evolved toward emphasizing the response LBNL takes to address the trends.

The Agreement to the measure requires that trend data be "summarized and reported to management on a regular basis", with recommendations of "proactive interventions" the Human Resources Department considers necessary. LBNL states in the self-assessment that it tracks employee and labor relations cases by division and issue and reports the data to the Human Resources Manager on a quarterly basis. The HR Manager makes a determination as to whether findings should be elevated to the Deputy Director of Operations. For FY 1999, no issues were elevated beyond Human Resources. However, a trend within one division was addressed with the division management to ascertain whether management deficiencies existed or training was necessary. This organization, along with two others with relatively high percentages of cases for their size, was identified by Human Resources for "monitoring" during FY 2000. No other findings resulted from the trend analysis conducted.

LBNL's performance under this measure warrants an **excellent**. LBNL collects and reviews trend data and elevates the results through the management chain as appropriate. In addition, the approach described in the self-assessment in terms of addressing an organization-specific trend with the division management was direct and proactive. Also proactive are the workshops on conduct and performance offered 15 times throughout the year. The impact of these is evident in the 30 percent reduction in performance cases from FY 1998, and from the increased emphasis on addressing conduct in the Facilities Division. Performance falls short of the outstanding level in that the training was not provided as a remedial action in response to trend analysis.

Performance Rating (Adjectival)**: Excellent**	88.00%

Performance Objective: #3 Equal Opportunity

Strengthen the commitment to and accountability for equal opportunity, affirmative action and work force diversity. **(Weight = 24%)**

Criteria: 3.1 Employment of Women and Minorities

Undertake efforts to promote workforce diversity and improve the representation of minorities and women in the workforce through the development and implementation of workforce diversity strategies and affirmative action "good faith efforts." **(Weight = 24%)**

Performance Measure: 3.1.a Employment of Minorities and Women

An assessment of planning and implementation of good faith efforts designed to improve recruitment, selection and retention of minorities and women in high priority underutilized job groups. **(Weight = 24%)**

General Agreement:

1. "High priority" underutilized groups will be selected at the beginning of the assessment period by each laboratory. The following factors may be utilized for the designation of "high priority" areas: underutilization levels, availability levels, projected placement opportunities and typical size and diversity of candidate pools.

2. The Laboratory will provide a results oriented plan(s) with a purpose of improving organizational performance in recruitment, selection, and retention of minorities and women in the selected "high priority" areas. The plan(s) will display the specific actions that will be targeted for achievement during the fiscal/calendar year and assigned responsibilities for those actions. The plan(s) shall incorporate, at a minimum, "good faith" efforts designed to enhance the following:
    - coupling of outreach and recruitment efforts in "high priority" job groups
    - systematic effort to measure and report outcomes and impact of the outreach and recruitment process
    - diversity and viability of candidate pools
    - efforts to educate and sensitize the workforce to diversity awareness
    - integration of diversity issues in Laboratory operations and the daily fabric of Laboratory life
    - active top management support of diversity considerations, including affirmative action and educational outreach efforts
    - representation of minorities as defined in the Laboratory's Affirmative Action Program

The plan shall include baseline data reflecting the factors utilized in the designation of the high priority job groups.

1. Agreements-Assessment Period: The assessment period for LBNL: for this Performance Measure will be January 1, 1999 through September 30, 1999.

2. Targeting of High Priority Underutilized Groups: High priority underutilized groups for the Laboratory will be selected no later than January 1.

3. Action-Oriented Plan: The Action-oriented Plan will be submitted by the beginning of each calendar year, no later than January 31.

Performance Gradient:

Unsatisfactory: Little or no effort has been demonstrated towards achievement of the performance measure.

Marginal: Some effort is demonstrated however results fall short of the expectations for the "good" gradient.

Good: Plan Development

1. Plan(s) Development -- The Laboratory develops a "results-oriented plan(s**)**" that clearly communicates the Laboratory's commitment and investment in carrying out its "good faith" efforts to develop strategies and actions to improve employment and retention of women and minorities in "high priority" underutilized job groups. The plan(s) must incorporate, at a minimum, "good faith" efforts and baseline data as outlined above.
2. Plan Execution - Specific actions identified in the plan were carried out substantially in the manner and time-frames identified in the plan.

   The Laboratory will summarize how the plan(s) was executed relative to the specific actions taken to improvement recruitment, selection and retention of women and minorities. The summary should include a narrative describing the efforts taken, and any significant outcomes or events resulting from the process. The summary should also include statistical analyses assessing the plan's effect on the representation of minorities in candidate pools, interviews, offers, placements, and attrition in the specified job groups.

Excellent: As a result of plan execution, women or minority qualified applicants for high priority underutilized job groups are represented at levels approximately equal to their availability for the majority of high priority job groups.

Outstanding: In addition to the criteria for excellent, women or minority offer recipients in one or more of the High Priority Job Groups equalavailability.

Performance Narrative:

FY 1999 is the third year to measure LBNL's development and implementation of a Recruitment Outreach Plan (ROP) as a means of improving representation of women and minorities in job groups considered high priorities.

LBNL experienced considerable difficulty in FY 1999 in meeting the deadlines required under the measure. The identification of the High Priority Job Groups (HPJGs), due January 1, 1999, was not communicated to OAK until March 22, 1999. The Recruitment Outreach Plan, due January 31, 1999, required three revisions until it was finalized July 13, 1999. Problems with the ROP involved issues fundamental to the success of the measure; i.e., failure to utilize projected hiring potential as a criterion for selection of HPJG's; lack of strategy in determining viable recruitment source; and unreliable statistical data.

Although LBNL was able to demonstrate that it participated in the recruitment sources it identified, its inability to produce an effective ROP that could be utilized throughout the appraisal period as a tool to increase representation warrants a rating of **marginal**.

Performance Rating (Adjectival)**: Marginal**	65.00%

Performance Objective: #4 Customer Needs

Human Resources identifies, evaluates and responds to customer needs. **(Weight = 14%)**

Criteria: 4.1 Customer Needs Analysis

Requirements, expectations and preferences of customers are collected and addressed. Strategies to evaluate and anticipate needs are in place. **(Weight = 14 %)**

Performance Measure: 4.1.a Customer Needs Input Strategy

Evaluation of customer input mechanisms , implementation strategies, and response. **(Weight = 14%)**

Agreement:

Mechanisms will be used to gather customer input regarding HR practices. Practices could be policies, services, programs, systems, processes, procedures. These mechanisms are varied and could include customer surveys, focus groups, customer feedback forms, ongoing meetings and forums, etc. Measurement will include the extent of utilization of customer input in improving HR practices and will include closing the loop with the customers. Measurement deliverable will be a narrative description of how the Laboratory addresses the performance criterion and objective.

Performance Gradient:

Unsatisfactory: Little or no effort has been demonstrated towards achievement of the performance measure.

Marginal: Some effort is demonstrated however results fall short of the expectations for the "good" gradient.

Good: Internal and external customer input mechanisms exist and are utilized to evaluate and improve human resources practices. Input and any changes to practices, whether resulting from feedback or not, are communicated to the customers, as appropriate.

Excellent: Internal and external customer requirements, expectations and preferences are collected in a methodical manner to evaluate and improve human resources practices. Methodical manner means the information sought from customer feedback mechanisms and the frequency of collection are clearly defined. Changes to existing practices, or new practices, are clearly linked to feedback results

as well as the Laboratory's strategic direction are communicated to the customers, and are evaluated for effectiveness as appropriate.

Outstanding: In addition to the items identified under Excellent; other data such as industry standards and HR practices, utilization of services and operational effectiveness indicators are collected and taken into consideration.

Performance Narrative:

Measurement of LBNL's Human Resources Department's efforts to identify and respond to its customers needs has occurred since FY 1997. The intent of measuring this area has been to ascertain the extent to which the Human Resources Department: 1) has established an approach/system to assessing its overall effectiveness; 2) validates the effectiveness of its services through feedback; and, 3) proactively seeks customer input in order to continually improve and adjust to changing needs. While the Objective and Criteria have essentially remained consistent, measure 4.1.a has evolved from the implementation/utilization of customer input mechanisms to evaluating the mechanisms themselves. The expectation under this measure has consistently been that the Human Resources Department would establish a system of two-way communication with its customers. Integral to this system would be various mechanisms/tools for assessing how Human Resources systems could more effectively meet the needs of its customers. In addition, there would be a strategy for the utilization of the tools.

In its self-assessment, LBNL describes its formal and informal methods of obtaining customer feedback, including: exit questionnaires, focus groups, training evaluations, meetings, and direct customer input. Two systemic changes described under POCM 1.1.a were referenced as successful examples of the use of focus groups. However, the consistency of LBNL's usage of focus groups is not apparent. The examples referenced imply appropriate utilization for revising or analyzing complex systems or issues that involve or impact a variety of customers/users/drivers. With regard to meetings as a customer input mechanism, several types were described by LBNL: 1) those focused on discussion of a particular human resources issue; 2) on-going meetings to share information and obtain status of items; and 3) those in which Human Resources is asked to participate in meetings initiated by others. While all these forums would involve customers and likely result in HR's receipt of some form of feedback, the meetings initiated by Human Resources to specifically obtain feedback on an issue or initiative are the most relevant as a customer feedback mechanism under this measure.

Other sources of input LBNL cites as mechanisms are "direct customer input; i.e., the noise level", and an informal poll taken of new hires. In the examples provided of these sources as mechanisms, it was apparent that the input provided to the Human Resources Department was a catalyst for change and improvement to human resources processes. This type of interaction with customers, however, would be expected of any organization as it conducts its daily business and interacts with customers. In addition, it must be acknowledged that "noise level" or ad hoc input can be highly unreliable. The input/feedback is not likely to be coming from a cross section of the customer population and may, in fact, be the opinions of a few disgruntled or, conversely, very positive customers. Making "changes" to policies or practices based on "noise level" feedback can potentially be dangerous. In determining customer satisfaction, the emphasis on the "noise level" factor was not responsive to the intent of this measure.

The self-assessment failed to provide either a specific "evaluation" of mechanisms, as required by the measure, or an evaluation of Human Resources' strategy for applying the various mechanisms. Descriptive statements addressing the utility of meetings and focus groups were made, such as "…these are a very valuable mechanism even though they are time intensive", and regarding focus groups, "This is an excellent method for getting customer input and feedback on particular issues." Statements of this nature; however, do not reflect analysis of how effectively each mechanism functions under the strategy by which it is utilized. It appears the mechanisms available are essentially utilized to ensure initiatives or process revisions are reasonable and workable. While this approach is appropriate for day-to-day issues, it does not serve to provide the Human Resources Department with a system for obtaining consistent feedback and input from identified sources that can be utilized in an on-going evaluation of its effectiveness.

LBNL's performance under this measure supports a rating of **good**. It can be established through the following examples that mechanisms exist that have been utilized to evaluate and improve human resources practices:

- Salary Module implementation
- Guest/Contract Labor Processing

Also in support of the good rating, LBNL "closes the loop" with customers on the implementation of a change through feedback sessions or via e-mail. A concern is that the lack of external mechanisms and implementation strategy, and the ad hoc use of the internal tools, indicate that the "system" for evaluating HR's ability to meet customer needs, has not been effectively established.

The excellent gradient was not achieved given the minimal discussion of LBNL's "methodical" collection/utilization of customer feedback mechanisms. The use of exit questionnaires and training evaluations, are the more "methodical" mechanisms utilized by LBNL HR, since they are a consistent source of specific data that can by analyzed and/or trended to ascertain the level of customer satisfaction. Examples were not provided, however, to illustrate that LBNL analyzes this data and has revised practices as a result of the feedback.

Performance Rating (Adjectival)**: Good**	72.00%

Performance Objective: #5 HR Leadership in Deploying Mission/Business Strategy

The Laboratory aligns its HR plan with the Laboratory strategic or institutional plan and supports the principle of the DOE contractor HR strategic plan. **(Weight = 14%)**

Criteria: 5.1 Alignment of HR Programs

HR and Diversity programs and policies are aligned with Laboratory strategic directions. **(Weight = 14%)**

Performance Measure: 5.1.a Deployment of Strategy

Evaluation of the HR strategic planning process that addresses alignment of HR programs and practices with the Laboratory's strategic direction and the well being of the Laboratory's employees. Measurement will also include the strategy to communicate with employees, supervisors and managers regarding HR programs and practices. **(Weight = 14%)**

Agreement:

Measurement Deliverable : Narrative description of the above.

Performance Gradient:

Unsatisfactory: Little or no effort has been demonstrated towards achievement of the performance measure.

Marginal: Some effort is demonstrated however results fall short of the expectations for the "good" gradient.

Good: Documented plan to align HR programs and practices with the Laboratory business plans or strategy. Documented communication strategy.

Excellent: Evidence of implementation of documented HR plan.

Outstanding: Evidence of implementation of the HR documented plan and communication strategy that addresses key aspects of the HR planning elements. For example, the work force planning process addresses the alignment of the work force with business needs such as core mission requirements, cost cutting or budget requirements and streamlining efficiency initiatives, while balancing such requirements with the needs of employees. And/or, the organization demonstrates a balance between work force and organizational needs by

effectively implementing strategies for targeted recruitment, skill mix requirements, internal placements, appropriate retraining programs, outplacement activities, etc.

Performance Narrative:

FY 1999 is the third year of evaluating the alignment of Human Resources' strategic planning with the Laboratory's strategic direction. The intent of this objective and measure is to determine the extent to which the Human Resources Department establishes itself as a strategic partner with Lab management. The expectation is that Human Resources would utilize a strategic planning process that would ensure that its priorities would serve to promote and support the strategic objectives of the Lab.

The measure language requires evaluation of the process utilized by the Human Resources Department in its strategic planning, and a description of the communication strategy used to inform employees of actions taken to achieve strategic alignment with the Laboratory. The communications element of the measure was minimally addressed; training was provided on revised Human Resources systems, and a web-site and flyer were created on work/life programs. A specific communications strategy was not described. Regarding the evaluation of the process, however, LBNL did not meet this requirement of the Performance Measure in either FY 1998 or FY 1999.

The focus of the self-assessment was to illustrate the activities through which the Human Resources Department supported the Laboratory's Strategic Plan and the Operations Vision. The Human Resources mission statement was provided, which, the self-assessment states, constitutes Human Resources' strategic plan. The strategic objectives that could be gleaned out of the mission statement could be firmly linked to the Laboratory's Strategic Plan, and more loosely to the Operations Vision. With few exceptions, the accomplishments cited also could be crosswalked to the either the Operations Vision or the Laboratory Strategic (Institutional) Plan.

In comparing the FY 1999 self-assessment to the FY 1998, there appears to be a significant divergence in the process utilized to conduct the Human Resources Department's strategic planning. For FY 1998, evidence was provided of a "Retreat" in which strategic objectives supportive of the Laboratory Strategic Plan were developed and documented for the Human Resources Department and each of its primary functions, i.e., employee relations, compensation, etc. In addition, a document entitled "FY98 Human Resources Strategic Plan" was developed, with specific goals specified for each unit within the Department. For FY 1999, there was no discussion in the self-assessment of a strategic planning meeting of this nature having occurred, or of an articulation of the specific strategic objectives and/or goals for which the functional areas would be accountable. The fact that Human Resources was able to cite examples supporting the Lab Strategic Plan and the Operations Vision confirms the use of these documents as drivers for the Department's priorities. There is no evidence, however, that they were accomplished as a result of a strategic planning process conducted by Human Resources.

LBNL's performance under this measure warrants a rating of **good**. Human Resources' mission statement is considered its strategic plan, and it is documented, as required by the good gradient. The gradient also anticipates a "documented" communication strategy, which LBNL apparently has not developed, although the FY 1998 Human Resources Strategic Plan contained one. Weighed into the rating determination is the fact that LBNL has cited accomplishments in which a connection can be ascertained between its mission statement/strategic plan and either the Lab's Strategic Plan or Operations Vision, as required by the excellent gradient. In determining that a rating of good is more appropriate than excellent, considered were the maturity of this measure, the concise, abbreviated

nature of the strategic plan in comparison to FY 1998, the failure to evaluate the process, and the absence of the documented communication strategy - a good gradient requirement.

Performance Rating (Adjectival)**: Good**	75.00%

Performance Area: INFORMATION MANAGEMENT

Performance Objective: #1 Information Management Program

The Laboratory manages information resources on a corporate basis to improve the quality of its products, to add value to scientific programs and customer services, and to improve the Laboratory's work processes. **(Weight = 100%)**

Criteria: 1.1 Operational Effectiveness

The IM program provides cost-effective products and improved services. **(Weight = 30%)**

Performance Measure: 1.1a Operational Effectiveness

Evaluation of measurable improvements and cost-effective operations. **(Weight = 30%)**

Assumptions:

Measurement deliverable - description of the information management program's accomplishments which have resulted in measurable improvements in the provision of cost-effective products and services. The description may be accomplished through reference to accessible work products or other existing Laboratory documentation.

"Operations" means the delivery of products and services.

Performance Gradient:

Good: Examples that demonstrate measurable improvement and cost-effective, IM services and products.

Excellent: Demonstrated results which contribute to institutional cost-efficiencies, savings, and improved operations.

Outstanding: External recognition of operational effectiveness or benchmarking that indicates best-in-class performance.

Performance Narrative:

The Laboratory Information Management (IM) organizations did an **outstanding** effort in the area of Operational Effectiveness. IM provided new technology products and services that resulted in substantial productivity improvements and cost savings.

In the area of computing, the Laboratory has made an outstanding effort in implementing new technologies to increase productivity. In addition to some larger examples of productivity listed below, numerous other efforts have resulted in substantial savings of full time employees (FTEs) and actual dollar costs.

- The implementation of the Financial Management System (FMS) system and the advances made in the Integrated Reporting and Information System (IRIS) data warehouse have resulted in improved system capabilities and process reengineering.
- As a result of the implementation of the Netscape Messenger Email system, legacy mail systems have been decommissioned, resulting in a reduced administrative effort Laboratory-wide of 3 FTEs.
- The new Netscape Calendaring System, which resulted in replacing five old servers with a single modern server. It also doubled the number of customers served to more than 2,000. This resulted in overall yearly savings of $10K per year in hardware maintenance costs and 1.5 FTE in effort. Further, web-based training for Netscape Calendar users during the deployment allowed the customers to receive training when they wanted it and at no charge. More than 400 people used the web-based training resulting in a $25K savings compared to paid classroom training.
- On-site training for Laboratory employees resulted in tuition savings of approximately $250K this year.
- Support for the introduction of Linux operating system, so far has saved the Laboratory $196K in hardware and $5K for software.
- The Laboratory has 12 site-wide licenses for Apple, Personal Computer (PC) and Sun software with a total cost of $366K this year. This cost is $1,487K below the General Services Administration (GSA) list price for individual licenses for this software.
- A Basic Ordering Agreement negotiated with Micron Corporation for the purchase of standard PC's using procurement card has resulted in discounts of about $100K this year.
- Outsourcing mainframe operations to Litton and the conversion of other systems to Unix and PC-based systems enabled the Laboratory to shut down its IBM mainframe computer center this year, resulting in savings of $345K annually.
- Shut down the Laboratory's final Digital cluster resulted in savings of more than $150K per year.
- The new IRIS reporting capabilities have enabled the complete phase-out of all centrally-printed reports resulting in an estimated savings of $375K per year.

The Laboratory has also received external recognition that it is operating state of the art Information Systems, particularly its Financial Management System and warehousing system. The Laboratory has frequently been called upon by other laboratories and organizations interested in adopting the same technology. These interactions have led to others (e.g., Stanford Linear Accelerator Center (SLAC), University of California at Berkeley (UCB), Kaiser Hill, Lawrence Livermore National Laboratory (LLNL)) asking to share the results of its efforts. The results of these efforts have led to smoother implementation of these systems at these locations. Additionally, LBNL has been asked to make presentations and serve on review boards at other organizations. The Laboratory also participates with the Gartner Group to stay abreast of industry developments, best practices and Information

Technology (IT) metrics. Information Systems and Services (ISS) also meets quarterly with the information systems directors from University of California Office of the President (UCOP) and the nine UC campuses. UCOP internal auditors indicated that LBNL has become the most advanced in leading the successful use of new system technology among the UC campuses and laboratories. OAK IMD's discussions with other facilities have confirmed that LBNL is operating at the leading edge of technology and its efforts over the last several years have resulted in enhanced capabilities for its users and significant savings for the Laboratory.

The Laboratory made an outstanding effort to demonstrate strong support for its computer security program. Increased allocations of resources have been applied through a well-documented risk management process. Improvements were achieved in areas of virus protection, incident response, anti-spam techniques, and computer security training and awareness. In addition, new initiatives were implemented for network vulnerability testing and incident tracking. The Laboratory's computer security program expanded to encompass the DOE's Joint Genome Institute (JGI) in Walnut Creek. Finally, the use of LBNL's intrusion detection system was significantly expanded to provide protection coverage for the National Energy Research Supercomputer Center (NERSC), the JGI, the Laboratory's Remote Access Services, and Information Services Systems.

In the area of Records Management and Archives, Technical and Electronic Information Department (TEID) demonstrated outstanding results in meeting its performance objectives. During FY 1999, TEID demonstrated measurable improvements and cost-effective services and products by reprocessing and rescheduling the backlog of legacy Laboratory Research and Development records stored at Building 903. This action insured that the Archives and Records Management (ARO) program met the requirements of the Internal Audit. The reprocessing improved the records search and retrieval process for the Laboratory and reduced the volume of records transferred to the Federal Records Center (FRC). In addition, the rescheduling of records allowed records to be destroyed before transfer, which reduced future storage costs. In addition, TEID demonstrated outstanding delivery of services and products by implementation of a job tracking and accounting system. This system contributed to institutional efficiencies, savings, and improved operations for TEID. In addition, the Report Coordination review process made considerable improvement with a 55 percent increase in the number of LBNL reports requested over those requested in FY 1998. TEID received external recognition of their operational procedures in ARO from visitors from the Government of Hong Kong.

Technical and Electronic Information Department (TEID) did an outstanding job in Printing operational effectiveness. In order to better serve customers, TEID started to track estimates versus the final cost on all jobs over $1K. Corrective actions to improve project estimates include routinely adding 10 percent to all estimates and preparing change orders for all customer revisions. Due to new technology, the print load in the two photocopy centers continued to decrease. TEID decided to staff the most heavily utilized photocopy center but released the staff members in the less utilized center. Customers can use the equipment in that center themselves or if they need a TEID staff member to do their photocopy work, a convenient job pick-up and delivery service has been initiated. TEID satisfied the customers' need for photocopy services while saving approximately $50K a year in personnel costs. TEID continues to look for ways to better improve delivery of products and services. TEID clearly demonstrated measurable improvement and cost-effective services.

In the area of telecommunications, productivity improvement was outstanding as shown by the program's demonstrated cost effective and innovative approaches to improving the products and services offered. This year's cost savings and avoidances reflected implementation of a range of strategies contained in the Telephone Service Center (TSC) Strategic Plan and TSC Projects. The TSC reduced the cost of monthly line charges from $29.00 to $21.00, a 25 percent reduction in cost to

Laboratory customers. TSC realized annual cost savings of $18K by taking advantage of various discounts from local and long distance carriers. By reengineering call distribution, TSC reduced trunking costs by $7K. Using standards for contract installers, TSC reduced cost to perform moves, adds and changes by $135K. Reducing paper telephone directories saved an additional $33K.

TSC is also a leader in developing its Unified Messaging and Computer Telephony Integration. A renegotiation of its Cellular One wireless system will result in a three year savings of $315K. Benchmarks for telecommunications services with other Universities, Laboratories and Corporations show that the Laboratory is offering its customers low rates.

Performance Rating (Adjectival)**: Outstanding**	93.00%

Criteria: 1.2 Customer Focus

IM products and services meet customer requirements. **(Weight = 30%)**

Performance Measure: 1.2a Level of Customer Satisfaction

Evaluation of customer satisfaction reviews and implementation of activities toward improvement. **(Weight = 30%)**

Assumptions:

Measurement deliverable - results of the customer satisfaction reviews.

Performance Gradient:

Good: A systematic approach to the measurement of customer satisfaction. Evidence of meeting commitments to customers requirements.

Excellent: Cost effective and/or innovative approaches to measuring customer satisfaction, customer involvement throughout life cycle of information management activities, and evidence of improvement in customer satisfaction.

Outstanding: Sustained high level of customer satisfaction.

Performance Narrative:

The IM organizations did an outstanding effort in soliciting, analyzing, and responding to customer satisfaction with their products and services. Techniques used were comprehensive and innovative. The results show a high level of customer satisfaction. Customer complaints receive prompt attention.

In the area of computing, the Laboratory has demonstrated an outstanding effort in measuring and achieving customer satisfaction. The Customer Satisfaction Surveys and Surveys of Training as well as Service Level Metrics show an increased level of satisfaction from last year. Computing Infrastructure Support (CIS)/Information Systems and Services (ISS) has an ongoing program to measure customer satisfaction through customer satisfaction surveys, service level metrics, and other approaches appropriate to its operations. Most Laboratory business applications (e.g. Financial Management System) had active user groups that provide a forum for direct customer feedback and input. ISS attended these meetings as an integral member. Breakout focus groups worked closely with ISS on a specific area. Two examples are the FMS Reports and the year-end ledger close.

CIS/ISS tracking of service level metrics has measured rising use of new systems and declining usage legacy systems. CIS/ISS also tracks user satisfaction with its Laboratory-wide training classes. Finally, CIS/ISS periodically sends out surveys to customers associated with a particular application, product or service. The results of customer satisfaction surveys show that customers are highly satisfied with CIS/ISS services. For example:

- ISS's Customer Satisfaction Survey shows 97 percent agree or strongly agree that "the CIS/ISS organization has improved its capability to meet my needs." Various surveys conducted over the past year have indicated a high level of satisfaction with products and services.

- The annual CIS/ISS survey indicates a very high level of satisfaction with systems and services with nearly seventy percent responded with a "strongly agree" to the survey, with another twenty seven percent indicating "I agree."

- The Help Desk's Trouble Ticket show high satisfaction with the service provided.

- The Calendar survey for replacement of the legacy Meeting Maker system resulted in a high level of satisfaction.

- The Netscape 4.51 survey showed a high level of satisfaction.

In many instances, the results of its service level metrics show that CIS/ISS is exceeding its customer expectations. For example, the new Web Reports Subscription Service launched a year ago has exceeded expectation. The system's usage has grown 5-10 times over last year, depending on what metrics are used. Another metric, the number of purchases being made with credit cards, has almost doubled over the past year to nearly 30,000 transactions with a value of $13 million. Increased usage of credit cards showed that users were accepting the new systems as easy to use and cost effective. The usage of the Central Help Desk has steadily increased over the past year reflecting the fact that the Help Desk is meeting or exceeding customer expectations.

CIS/ISS demonstrated it is using innovative and cost effective approaches to measure customer satisfaction. Examples are the use of the Remedy tracking system for the help desk, web-based surveys, conducting the annual CIS/ISS survey by phone, and use of town hall meetings. CIS/ISS has shown aggressive action and substantial progress in developing and completing Action Items in response to the customer satisfaction program. One example of this was the development of a special team to help users extract information from the new Financial Management System. Another example is the FMS team instituting weekly ledger closings rather than monthly, in response to customer surveys. The results of surveys and service level metrics shows a rising level of customer satisfaction and customer acceptance of new products and improvement over prior year levels. Satisfaction for web information tools increased in the strongly agree category over last year and satisfaction with the Help Desk significantly increased. Systems are being accessed more often and by more people than ever before. The increased usage statistics also indicate that, with the advent of the web-based information systems, the customer base has expanded to the entire Laboratory.

In the area of Records Management and Archives, TEID did an excellent job in meeting its performance objectives. During FY 1999, the Archives and Records Management Program at LBNL developed a systematic approach for the measurement of customer satisfaction and implementation of activities toward improvement. TEID periodically meets with customers to discuss new services and receive feedback about ongoing services. Archives and Records Management (ARO) demonstrated

improved customer satisfaction, based on evaluation of the feedback and results from group discussions. The feedback was incorporated into the Department's weekly meetings and become part of the planning process.

Archives and Records Management sent out 143 Surveys and received 48 replies with 72 percent rating the service excellent. This is a significant improvement over last year's score of 65 percent/excellent rating. This signifies evidence of improvement in customer satisfaction. Evaluation of the customer satisfaction reviews and customer meetings resulted in TEID expanding the Archives and Records Office (ARO) website information to include a "Frequently Asked Questions" sections to help Laboratory employees determine what was and wasn't a record. TEID also implemented a new series of customer meetings this year that made customers more aware of ARO services and obtained additional feedback on improving its service.

In the area of printing, Technical and Electronic Information Department (TEID) has done an outstanding job with Customer Satisfaction. TEID continued to periodically meet with customers to discuss new services and receive feedback about ongoing services. The results from these discussions were incorporated into the Department's weekly meetings and become part of the planning process. In addition, during the report period, the Department Head and Account Representative made presentations to various groups at the Laboratory. The purpose of these meetings was to familiarize customers with the services that TEID provided and to get feedback about services that the customers had already received. At the Group Leaders' meeting, the user feedback was analyzed and changes were made in procedures.

Printing Services questionnaires were sent out with most of the jobs. Out of 45 returned, the ratings were as follows: 91 percent excellent and good, nine percent adequate, and zero percent poor. This showed an improvement over last year's score which was 79 percent excellent and good, 20 percent adequate, 1 percent poor. Comments from the questionnaires proved that customers were much happier with the turn-around time for internal printing services. However, TEID continues to pursue working with the Government Printing Office (GPO) to decrease turn-around time of some of those jobs.

In the area of Radio Frequency Management, the Laboratory is doing a good job in assessing customer satisfaction. Surveys of the program show that customers are generally satisfied. The customer satisfaction survey process is still done by informal telephone calls to the customers because they have a small cutomer base.

In the area of Telecommunications, the Laboratory did an outstanding job in customer satisfaction. The results of customer satisfaction surveys show that TSC is exceeding its customer expectations. The results of customer satisfaction surveys show that customers are highly satisfied with TSC services. TSC shows aggressive action and substantial progress in developing and completing action items in response to the customer satisfaction program. TSC customer requirements survey covered satisfaction with current customer service levels as well as which emerging technologies may be useful to the Laboratory. High marks were received for customer service response time, reliability, follow through in resolving customer problems, and the single point of contact for customers. TSC identified Integrated Messaging and Wireless Integration as two evolving technologies its customers wanted, and has begun planning to implement these technologies.

Performance Rating (Adjectival)**: Outstanding**	90.00%

Criteria: 1.3 Effective IM Management Systems, Operational Practices and Internal Controls

Provide for effective self-assessments and corrective actions among the IM Focus Areas of IM management systems, operational practices and internal controls to ensure that information management functions provide effective support of programmatic and institutional goals.

(Weight 20%)

Performance Measure: 1.3.a IM Self-Assessment and Corrective Action Program

Evaluation of the effectiveness of the IM Focus Areas' self-assessment programs' ability to identify, review and correct (if deficiencies are identified) programmatic and institutional management systems, operational practices and internal controls. **(Weight 20%)**

Assumptions:

Measurement deliverable – self-assessment of the Information Management Focus Areas and any compliance issues appropriate to the Laboratory. The Laboratory and its DOE Operations Office will agree on IM Focus Areas. "Compliance" refers to requirements of law, regulations and applicable DOE directives.

IM compliance issues will be evaluated on a Pass/Fail basis. The Laboratory and its DOE Operations Office will agree on the relative weighting of the IM focus areas and any existing compliance issues to be addressed in the Self-Assessment.

***** The IM Focus Area agreements between each Laboratory and its Operations Office will include weights and specific criteria for Good, Excellent and Outstanding gradients for each agreed-upon IM Focus Area. These agreements will be concluded prior to October 1, 1998.

Performance Gradient:

Good: Management techniques are employed to assess the effectiveness of IM Focus Areas' performance in support of programmatic and institutional information management needs including internal process controls.

Objective supporting material is available evidencing progress in identifying and correcting performance and compliance issues. Previous deficiencies have been corrected or have corrective action plans in place.

Excellent: There is a sound systematic approach responsive to the overall purpose of managing assessment processes and implementing corrective actions. Substantive progress has been made in self-identifying and closing deficiencies.

Outstanding: The Laboratory has institutionalized an evaluation process which effectively identifies performance and compliance issues and corrects weaknesses. This results in outstanding support of programmatic and institutional organizations with all compliance and agreement areas being addressed.

Performance Narrative:

The IM organizations did an **excellent** job in assessing their performance. Self assessment activities identified user requirements and led to actions to address these requirements. Replacement of legacy systems with modern technology significantly increased user productivity. Approaches used were very successful, highly effective, cost-effective, and innovative. Aggressive corrective action to "critical" action items has been demonstrated.

CIS/ISS has done an outstanding job in its self assessment activities. The Management Information Systems (MIS) Management Steering Committee provides continuous oversight resulting in the identification of critical deficiencies leading to major projects and the completion of those projects. The best example of this is the replacement of its legacy information systems with modern technology. This multi-year undertaking resulted in removing the many deficiencies encountered with the old systems. CIS/ISS also demonstrates substantial progress in assessing its Year 2000 (Y2K) vulnerabilities. Y2K compliance requirements for its administrative systems have been identified, corrected, and thoroughly tested.

CIS/ISS demonstrated self-assessment approaches that are unusually successful, highly effective, cost-effective, and/or innovative. For example, innovative approaches include the establishment of project reports on the web for Laboratory-wide viewing, formal MIS Management Steering Committee meetings, and numerous visits to Divisions to seek customer assessment of its work. For major projects, such as the new Budget System, ISS has established formal weekly meetings with its customers' key project management personnel to oversee project progress and to rapidly identify and to resolve problems.

CIS/ISS demonstrated aggressive corrective action approaches to "critical" action items. It established a central Help Desk that replaces six help desks. This enables CIS/ISS to identify recurring problems and track its performance in resolving them. ISS also displayed aggressive action in replacing its Property Management System, and increasing the capabilities and range of data within IRIS. IRIS represents a leading edge implementation of data warehouse capabilities. Another aggressive action has been the formation of an ISS group specifically dedicated to the computing needs of the Environmental, Health, and Safety (EH&S) Division.

ISS aggressively pursued an early completion of (Y2K) compliance by using a number of new and innovative approaches. For example, new systems obtained from outside suppliers were upgraded to newer vender software releases that were Y2K certified. ISS also established a dedicated in-house Y2K data center to test the upgraded applications in a real-world Y2K processing environment. Tests were also performed with the banks and other electronic data transfer parties such as benefit carriers. This approach to assuring Y2K compliance has given ISS a high degree of confidence that these

systems will continue to operate properly on January 1, 2000 and beyond. Finally, the acquisition of the Centennial 2000 software enabled the testing of PC hardware and software through the Laboratory's communication network. The Laboratory's efforts with regard to assuring Y2K compatibility for LBNL's systems have been substantial and innovative.

In the area of Computer Security, the Laboratory has done an excellent job in self assessment. Through a continual process of self-assessment, the Laboratory establishes annual milestones for its computer security program, which are then documented in an Implementation Plan. LBNL has done an excellent job in achieving all milestones for their 1999 Computer Security Implementation Plan (CSIP). Continued enhancements have been made to LBNL's intrusion detection system (BRO) to provide many blocking capabilities in addition to detection. BRO has also been deployed to several other systems throughout the Laboratory, offering an improved multi-layered protection strategy.

The Archives and Records Office (ARO) did an outstanding job in meeting its performance objectives for self assessment. The Laboratory correctly scheduled newly accessioned inactive R&D records in accordance with the recently approved R&D Records Schedule. Since the agreement required FRC and ARO to follow quality guidelines, no Berkeley Laboratory accessions have been rejected by the FRC facility. ARO has implemented all recommendations from the Internal Audit No. 96-020 by successfully reprocessing and rescheduling the backlog of Laboratory R&D records stored in the warehouse. The reprocessing and rescheduling of the Laboratory R&D records, along with the review and scheduled transfer of records to the FRC reduced the volume of records stored at B903 from 2177 containers to 991 containers at the end of July 1999. In addition, ARO presented an RLO workshop on identification of vital records and established an automated RLO mailing/discussions list to provide a forum for records related questions and answers.

In the area of Printing, Technical and Electronic Information Department (TEID) did a good job in working with the Government Printing Office (GPO) to try and decrease late deliveries. Of the 235 jobs printed through GPO, 17 had late deliveries. This means that 92.7 percent of the GPO jobs were delivered on schedule. This reflects a 1.5 percent improvement over last year's numbers. TEID continues to work with GPO in an attempt to further reduce the number of late deliveries. TEID also did a good job in delivering jobs on time. Of the 556 jobs printed internally, 46 had late deliveries. This means that 91.5 percent of the jobs were delivered on time. This is approximately the same percentage of on-time deliveries as last year. TEID will continue to explore ways so that they may decrease late deliveries.

In the area of Radio Frequency Management, the Laboratory has done a good job in the area of self assessment. Self assessment activities demonstrate that compliance issues are being effectively addressed. The program has been reassigned to the Facilities Department, allowing improved coordination and communication between engineering and maintenance people. A repair cost report has been in place that tracks costs of radio repair. Analysis of trends helps in making repair/replace decisions and in finding abusive users. A corrective action of requiring belt holsters has resulted in a decrease in smashed phones from dropping. Replacement of radios has been placed on hold pending the acquisition of a new Ultra-High Frequency (UHF) trunked radio system.

In the telecommunications area, the Laboratory did an excellent job in self assessment. The program made effective use of self-assessment approaches that are unusually successful, highly effective, cost effective, and/or innovative. Examples include focusing strongly on the customer. TSC uses customer feedback mechanisms, such as the Telephone Service Advisory Committee (TSAC), with representatives from each division at the Laboratory. Discussions with TSAC members and customers about problems, and anticipated future needs enable TSC to incorporate customer input to TSC plans.

One example is the TSC Fraud Report which tracks the 25 most frequently called numbers and checks calls for long duration. Daily, weekly, and monthly diagnostic and hardware reports are in place to identify problems with users' mailboxes. One indicator of the success of its efforts is that LBNL's telephone switch and the voice mail system have not been compromised or hacked.

Performance Rating (Adjectival)**: Excellent**	88.00%

Criteria: 1.4 Strategic and Tactical Planning

IM plans and practices are aligned with Laboratory strategic and tactical requirements.

(Weight = 20%)

Performance Measure: 1.4.a Planning Initiative

Evaluation of evidence that Information Management is aligned with the Laboratory's missions.

(Weight = 20%)

Assumptions:

Measurement deliverable – IM plans or descriptions of IM initiatives that support the mission and plans of the Laboratory. Reference may be made to accessible work products or other existing Laboratory documentation.

Performance Gradient:

Good: Planning, evidenced by documentation, that effectively supports the Laboratory's missions.

Excellent: A planning process exists which drives IM practices to align with the Laboratory's missions.

Outstanding: Evidence that the IM planning process can adapt to changing conditions, employs sophisticated methods or planning tools, and has received external recognition of excellence.

Performance Narrative:

The IM organizations did an **outstanding** job in strategic and tactical planning. IM planning was geared toward addressing the mission of the Laboratory and with the business functions they support. Customer involvement in planning was comprehensive.

CIS/ISS is doing an outstanding job in the area of planning. CIS/ISS's planning includes the LBNL Institutional Plan, Financial Systems Plan, ISS Strategic Plan, and CIS/ISS's Objectives which identify the "critical few" objectives having the greatest impact on the Laboratory mission. In addition, the MIS Management Steering Committee ensures that CIS/ISS plans are aligned with the Laboratory mission and customer requirements. This group is chaired by the Associate Laboratory Director for Operations and includes all of the Operations Division Directors and Department Heads along with key members of their staff and the Administrators for each of LBNL's Scientific Divisions.

Meetings are held on a quarterly. Y2K compliance has been a top priority of CIS/ISS throughout FY 1999. Extensive planning in the Y2K compliance area was performed to identify, remediate, and test for Y2K problems. In CY 1998, CIS/ISS completed all seven of its "critical few" objectives, resulting in enhanced performance.

Successes included the Y2K compliance effort, shutting down of the last legacy mainframe computer, two new versions of IRIS, a new web-based calendaring system, and a new email system. The most critical of its ongoing goals has been new PeopleSoft Financial Management Systems (FMS), and extension of the PeopleSoft Human Resources Information Ssytem (HRIS) system. These objectives were met on schedule.

Based on comparison with industry standards, independent benchmarks, and demonstrated use of emerging technologies, CIS/ISS is a leader in implementing new and beneficial information technology. Planning for modernization has been underway for several years, and will result in the replacement of all of the Laboratory's information systems. The new infrastructure will be based on client/server and relational database capabilities, off-the-shelf software, and web technologies. The Laboratory was an early implementer of the PeopleSoft payroll/HRIS system, and also implemented a data warehouse with web based inquiry capability. The Laboratory is now positioned to help industrial companies and other laboratories with their implementation. An example of this leadership is provided by Kaiser-Hill's evaluation of the electronic time entry systems and selection of LBNL's system for their own use at Rocky Flats.

The Laboratory achieved outstanding results in their computer security program by actively involving several different LBNL organizations in its planning and direction decisions. By utilizing the skills and expertise of such groups as the Computer and Communications Security Committee, the Systems and Network Security team, and Division Liaisons, along with the increased involvement of the Information and Computing Sciences Division (ICSD) Division Director, LBNL's computer security program has been significantly strengthened. While overall improvements have been achieved, specific problems unique to some organizations can also be analyzed and addressed more effectively through such crosscutting planning strategies.

In the area of Records Management and Archives, TEID has done an outstanding job in planning to effectively support the Laboratory's mission. Some of the documents that constitute this planning are the Internal Audit Department review of the Archives and Records (AR)) procedure and the implementation of their recommendations by ARO in future planning project. In addition, TEID management incorporates customer feedback and service improvements into the strategic plan.

The Laboratory has an excellent planning process, which drives TEID practices to align with the Laboratory's mission by hiring a consultant to review current procedures and deliver (4) reports to TEID:

- Current Work Flow
- Business Improvement List
- Optimal Workflow
- Software Analysis

TEID will review these recommendations into a new strategic plan that will bring the Department into the future.

TEID based its planning efforts on meeting the needs of its customers with quality and efficiency. This process involves meeting with customers to ascertain their needs, providing the service that will enhance their research and constantly looking for ways to improve quality service.

Additional evidence of outstanding planning methods employed by TEID is demonstrated by external recognition by a peer review committee with representatives from National Laboratories, other research laboratories, and private industry. The committee found that TEID is moving in the right direction and their planning process demonstrates that it is aligned with the Laboratory's mission.

In the area of printing, Technical and Electronic Information Department (TEID) has an outstanding planning process that is in align with the Laboratory's mission. DOE's "Printing and Publishing Activities Three Year Plan" is published each year by the Printing section. The report contains data on unit volumes, revenues, and costs. This aids in tracking printing and duplicating activity and costs. The completed report is sent to the Oakland's Operations Office per request. TEID management continues to periodically meet with the customers to understand the client's needs and concerns. In turn, the TEID Group Leaders meet weekly to discuss production planning, customer feedback and service improvements, prioritize and implement projects, and follow through with projects until successful completion. The results from these discussions are incorporated into the strategic plan.

In the area of Radio Frequency Management, the Laboratory is doing a good job in the area of strategic and tactical planning. The self assessment provides sufficient evidence that documents planning that effectively supports the Laboratory's missions. Preparation for the trunked radio system installation has made good progress. Analysis of the planned placement of the trunked radio antenna to give good coverage and the least impact on other radio services is progressing satisfactory. This program continues to manage frequency assignments, interference resolution, and licensing for the Laboratory.

The telecommunications program did an excellent job of planning. The program achieved successful accomplishment of milestones and progress toward completion of the major objectives, as well as the complexity and innovativeness of the critical objectives. The TSC's overall goals are based on the Laboratory's Strategic Plan for Operations and Infrastructure outlined in the Berkeley Laboratory Institutional Plan. The TSC's primary objective is to integrate telephony. TSC achieved its critical objectives which were the Y2K software upgrade of the phone switch, the installation of the voice mail system at the Joint Genome Institute, the relocation of staff to the new Berkeley Tower in downtown Berkeley, the Wireless Evaluation, wireless Integration, and completion of the telephone bill on the web pilot.

Performance Rating (Adjectival)**: Outstanding**	91.00%

Performance Area: PROCUREMENT

Performance Objective: #1 Management of Internal Business Processes

The Laboratory shall have systems in place to ensure Procurement programs operate in accordance with policies and procedures approved by DOE and which ensure that business is conducted at an optimum operational efficiency level. **(Weight = 70%)**

Criteria: 1.1 System Evaluation

The Laboratory conducts, documents, and reports annually, the results of a successful assessment of its purchasing system against established evaluation criteria. **(Weight = 30%)**

Performance Measure: 1.1.a Assessing System Operations

The Laboratory shall develop and submit a risk-based system evaluation plan to DOE and UC no later than October 1, 1998, for review and concurrence. The procurement system shall be assessed against system evaluation criteria as identified in the plan. In addition, an aggressive, cost effective management plan for resolution of system deficiencies and opportunities for process improvement shall be developed. Management of the results of the system assessment shall be evaluated. System deficiencies will include those identified by the Laboratory, internal Laboratory organizations, and external organizations. **(Weight = 30%)**

Basis for Rating:

Good: There is a sound, systematic approach, responsive to the primary purpose of the system evaluation. Cost benefit analyses and risk assessments are good when addressing deficiencies and/or opportunities for improvement. Implementation of remedial actions is appropriate and demonstrates responsible leadership in many to most cases.

Excellent: The requirements for a Good rating are met. There is a sound, systematic approach, responsive to the overall purpose of the system evaluation. In addition, cost benefit analyses and risk assessments are rated good to excellent when addressing deficiencies and/or opportunities for improvement. Implementation of remedial actions is sound and demonstrates responsible leadership in most cases.

Outstanding: The requirements for an Excellent rating are met. There is a sound, systematic approach, fully responsive to all the requirements of the system evaluation. In addition, cost benefit analyses and risk assessments are rated excellent when addressing deficiencies and/or opportunities for

improvement. Implementation of remedial actions is sound and demonstrates strong leadership in most cases.

Performance Narrative:

LBNL has a sound, systematic, and well-planned approach to assess all the purchasing system elements. The plan is well documented and specifies the review schedule, approach, sampling techniques, corrective action strategy, and criteria. The plan is agreed to annually in advance of the assessments. The quarterly assessment schedules are followed meticulously throughout the year. The assessment team is led by an individual external to Procurement. Procurement operations conducts a thorough review of all the major system elements over the required 3-year cycle with specific elements assessed annually. The assessments conducted in FY 1999 were Procurement Card Purchases, Management System, One-Time Purchases, and Fabrications.

Each individual system evaluation thoroughly documents the cost benefit and risk assessment in system compliance, cost and efficiency, and effectiveness. The self-assessment reports address the risk assessment, deficiencies, corrective actions, improvement opportunities, cost benefit analyses, priorities, risk assessment, and the Procurement Manager's response. The Procurement Manager's leadership and management of the corrective actions are excellent. The Procurement Manager prioritizes the corrective actions and implements the activities to improve the system.

Implementation of remedial actions is excellent and timely; validation of corrective actions are performed within six months of implementation. No systemic deficiencies were identified in the quarterly evaluations. However, one Purchase cardholder was cited for one deficiency (failing to maintain transaction log, no material receipt acknowledgment, and no statement of account approval). Management suspended the Cardholder's privileges for 3-months.

Performance Rating (Adjectival)**: Outstanding**	95.00%

Criteria: 1.2 Pursuing Best Practices

The Laboratory successfully uses benchmarking data and industry standards to identify targets of opportunity for improving operational efficiency and pursues opportunities aggressively.

(Weight = 20%)

Performance Measure: 1.2.a Measuring Efficiency

The Laboratory will be measured against benchmarks and industry standards for cycle time and utilization of alternative procurement approaches/techniques (e.g. rapid purchasing, JIT, and purchase card). The Procurement organization will use FY98 results to establish baselines, goals and gradients no later than December 1, 1998. **(Weight = 20%)**

Basis for Rating:

In partnership with DOE and UC, the Laboratory shall identify benchmarks and industry standards in each procurement area identified as a core requirement in the DOE Balanced Scorecard and establish and justify goals in pursuit of those standards. The Laboratory may propose gradients based on data other than benchmarks and industry standards if the Laboratory provides adequate support of other optimum operating levels.

Assumptions:

Users are defined as those individuals making procurements who are external to the procurement core organization.

Performance Narrative:

To expand its benchmarking horizons, the Laboratory voluntarily participated with the Center for Advanced Purchasing Studies (CAPS) DOE Contractor Benchmarking Group. The following are the DOE, LBNL, and UC agreed to goals and gradients:

Cycle Time (Weight: 10 percent)

Baseline:	8.2 days
Gradient:	Good (12.1 to 14 days)
	Excellent (10.1 to 12 days)
	Outstanding (10 days or better)

LBNL's performance resulted in 7.2 days which compares extremely well with the FY 1999 CAPS DOE Contractor benchmark of 10.5 days and represents a full day reduction from 8.2 days experienced at LBNL in FY 1998. This outstanding performance was achieved as a result of reengineering the simplified file documentation checklists, and expanding the use of best-value source selection.

Alternate Procurement Approaches: Credit Card Usage (Weight: 10 percent)

Baseline: 56.8 percent
Gradient: Good (58.5 percent)
Excellent (60.2 percent)
Outstanding (61.9 percent)

LBNL's performance resulted in 71.7 percent procurement card usage as an alternative procurement technique. Contributing to the increase use of procurement cards is:

- Increased program activity,
- Final phase of low-value buyers' conversion to Procurement Card, and
- Increased use by Cardholders.

A new high of 32,919 procurement card transactions out of a total of 45,900 transactions was achieved for FY 1999. The Laboratory's previous record was 24,707 transactions in FY 1998. This resulted in total cost savings of $724,218 and procurement card growth by 33 percent from FY 1998.

Performance Rating (Adjectival)**: Outstanding**	95.00%

Criteria: 1.3 Supplier Performance

The Laboratory shall manage its suppliers in such a manner as to ensure that the goods and services provided meet the Laboratory's requirements. **(Weight = 15%)**

Performance Measure: 1.3.a Measuring Supplier Performance

The Laboratory shall measure the performance of its key suppliers. Supplier performance will be measured from a baseline with goals and gradients agreed to by the DOE, UC, and the Laboratory no later than November 30, 1998. **(Weight = 15%)**

Basis for Rating:

Good: The Laboratory has identified its key suppliers and measures their performance against the baseline established for each of those suppliers. Supplier performance improvement goals for a Good rating, as selected by the Laboratory in partnership with DOE and UC, have been achieved.

Excellent: The requirements for a Good rating are achieved and, in addition, supplier performance improvement goals for an Excellent rating, as selected by the Laboratory in partnership with DOE and UC, have been achieved.

Outstanding: The requirements for an Excellent rating are achieved and, in addition, supplier performance improvement goals for an Outstanding rating, as selected by the Laboratory in partnership with DOE and UC, have been achieved.

Performance Narrative:

The established gradients agreed to by DOE, LBNL, and UC are as follows:

Baseline: Average On-Time Delivery Rate of Key Suppliers: 86 percent

Good: Aggregate supplier on-time delivery rate of 85 percent.
Excellent: Aggregate supplier on-time delivery rate of 88 percent.
Outstanding: Aggregate supplier on-time delivery rate of 91 percent.

Procurement achieved an aggregate on-time delivery rate of 88 percent for key suppliers. This is excellent performance toward closing the gap on supplier's on-time deliveries. Procurement's success in improving from 59.3 percent in FY 1997 and 86 percent in FY 1998 is due to continued management's emphasis to the buyers on monitoring suppliers, improved tracking methods, bi-weekly supplier performance reports, and assertiveness with the supplier on the importance of on-time

delivery. Procurement continues to make great strides in improved performance in this contract administration area.

Performance Rating (Adjectival)**: Excellent**	82.00%

Criteria: 1.4 Socioeconomic Subcontracting

The Laboratory shall support and promote socioeconomic subcontracting programs. **(Weight = 5%)**

Performance Measure: 1.4.a Meeting Socioeconomic Commitments

The percentage of actual subcontract dollar obligations (not subcontract face value) in the following 4 categories will be compared against goals negotiated for FY99.

(a) Small Business
(b) Small Business Set-Asides
(c) Small Disadvantaged Business
(d) Women-Owned Small Business

The Laboratory will propose and provide supporting rationale and statistical support for socioeconomic goals. **(Weight = 5%)**

Basis for Rating:

Good: Meeting all goals with consideration given to changes in funding profiles, changes in forecast, deletion of requirements, etc., should goals not be met.

Excellent: Exceeds three of the four goals and meets the fourth goal. Consideration will be given to regional/local outreach programs, Good Neighbor Program, awards/recognition, pilot program participation, and/or other support for DOE socioeconomic programs when the Laboratory is borderline to meeting a goal that leads to a rating of Excellent.

Outstanding: Exceeds all goals. Consideration will be given to regional/local outreach programs, Good Neighbor Program, awards/ recognition, pilot program participation, and/or other support for DOE socioeconomic programs when the Laboratory is borderline to meeting a goal that leads to a rating of Outstanding.

Assumptions:

It is recognized that pursuit of cost effectiveness and best business practices may have an impact on the establishment of socioeconomic goals and/or on the final achievement of such goals. Consideration will be given to this impact during forecasting and mid-year updates of goals and during evaluation of self assessments.

Obligations qualifying in more than 1 category may be counted in more than 1 category, e.g., Small Business and Small Business Set-Asides. Lower tier subcontracts cannot be counted toward the primary goal, but may be goaled and reported separately.

The purchasing base for purposes of this measure is all obligations incurred during the fiscal year period, excluding: (1) Subcontracts with foreign corporations which will be performed entirely outside of the United States; (2) Utilities (gas, sewer, water, steam, electricity and regulated telecommunications services); (3) Federal Supply Schedule Orders when all terms of the GSA contract apply; (4) GSA Orders when all terms of the GSA contract apply; (5) Agreements with DOE management and operating contractors and University campuses; (6) Federal government and DOE mandatory sources of supply; Federal prison industries, industries of the blind and handicapped; and (7) Procurement card purchases.

Note: The schedule for submitting and negotiating goals will be followed per Appendix D.

Performance Narrative:

The following are the established small business goals and the results.

Category	Goals	Results	Dollars
Small Business	32 percent	51.8 percent	$59.8M
Small Business Set-Asides	16 percent	27.1 percent	$31.2M
Small Disadvantaged Business	10 percent	9.6 percent	$11.1M
Women-Owned Small Business	5 percent	5.9 percent	$6.9M

There was not a mid-year adjustment to the goals.
Based on a year-to-date procurement base of $115.4M

LBNL's Small Business Subcontracting Program continues to demonstrate a high level of support in implementing their Small Business program objectives and meeting the established goals. Procurement exceeded three of the four conservative goals and just missed achieving the Small Disadvantaged Business goal this performance year. This is a commendable achievement given the migration of low-value purchases to the divisions (system contracts and procurement card); and the increase in procurements for system computing systems, contract labor consolidation, and diminished craft labor usage that were awarded to large businesses. The excellent rating given considered the extended and intensified outreach to the local small business sector, participating in local and DOE-sponsored trade and technology expositions, and participating in the DOE/Small Business Administration-sponsored workshops.

Performance Rating (Adjectival)**: Excellent**	80.00%

Performance Objective: #2 Customer Satisfaction

The Laboratory shall periodically assess the degree of satisfaction with Procurement's ability to meet customer needs in terms of timeliness, quality, and communications. **(Weight = 10%)**

Criteria: 2.1 Customer Feedback

As a continuous indicator of overall customer satisfaction, the Procurement Organization shall survey in the last half of the rating period the needs and satisfaction of its external customers relative to its purchasing systems and methods. The following customer groups will be surveyed and weighted as indicated:

- Laboratory customers (70%)
- DOE (20%)
- Suppliers (10%) **(Weight = 10%)**

Performance Measure: 2.1.a Customer Satisfaction Index

A customer satisfaction index for the Procurement Organization shall be created from the results of the individual surveys of customer groups using the weighting as indicated in the criteria using a 100 point scale. The satisfaction index is to be tracked and trended with an upward trend expected. The DOE/UC/ Laboratory will mutually agree on the acceptability of the surveying process and contents no later than November 1, 1998. Survey results will be finalized no later than September 1, 1999. **(Weight = 10%)**

Basis for Rating:

Good: The Procurement Organization achieves a customer satisfaction score of 60.

Excellent: The Procurement Organization achieves a customer satisfaction score of 70.

Outstanding: The Procurement Organization achieves a customer satisfaction score of 80.

Assumptions:

Included in the evaluation will be a summary describing the activities that support the index score achieved. Consideration will be given to activities/efforts taken to improve customer satisfaction.

Performance Narrative:

A composite customer satisfaction weighted index of 83.7 percent is a result of surveying requestors, suppliers, and DOE representatives. The requester's scores increased from 76.5 percent in FY 1997 to 83.0 percent in FY 1999. This increase is attributed to communicating and understanding the procurement process and status of their requirements. The supplier's scores increased slightly from 85.5 percent in FY 1997 to 87.0 percent in FY 1999. This increase is attributed to improvement in more cost effective systems and electronic commerce. The DOE representative scores decreased from 88.2 percent in FY 1997 to 84.7 percent. Despite the slight drop, the DOE representatives are generally satisfied.

Performance Rating (Adjectival)**: Outstanding**	93.00%

Performance Objective: #3 Learning and Growth

The Laboratory shall ensure that information and feedback mechanisms are available to procurement employees to enhance continued successful procurement operations. **(Weight = 10%)**

Criteria: 3.1 Employee Feedback

The Laboratory shall foster improvement of processes and performance by assessing and pursuing improvements in employee satisfaction. **(Weight = 5%)**

Performance Measure: 3.1.a Employee Satisfaction Index

A Procurement employee satisfaction index shall be created from the results of an employee survey using a 100 point scale. The satisfaction index is to be tracked and trended with an upward trend expected. The DOE/UC/ Laboratory will mutually agree on the acceptability of the surveying process and contents no later than November 1, 1998. Survey results will be finalized no later than September 1, 1999. **(Weight = 5%)**

Basis for Rating:

Good: The Procurement Organization achieves an employee satisfaction score of 60.

Excellent: The Procurement Organization achieves an employee satisfaction score of 70.

Outstanding: The Procurement Organization achieves an employee satisfaction score of 80.

Assumptions:

Included in the evaluation will be a summary describing the activities that support the index score achieved. Consideration will be given to activities/efforts taken to improve employee satisfaction.

Performance Narrative:

The employee satisfaction weighted index of 81.2 percent for FY 1999 slightly decreased from the FY 1997 index of 82.7 percent. The employees are generally satisfied with procurement operations and management. The feedback indicates areas for improvement are more time to perform assignments and better communications.

Performance Rating (Adjectival)**: Outstanding**	92.00%

Criteria: 3.2 Information Availability

The Laboratory shall make readily available to its employees current information important to the successful performance of their procurement related functions. **(Weight = 5%)**

Performance Measure: 3.2.a Measuring Availability of Information

The Laboratory will identify procurement related employee information needs and compare these with information currently available to the employee for the purpose of identifying information shortfalls. The Laboratory will submit a plan outlining the approach to be employed in baselining the total number of information items available versus total the number of information items needed. Approach and deployment of the plan in establishing a baseline will be evaluated for FY1999 and will include the process by which the Laboratory will determine information items needed and available. The final milestone of the plan will be to develop gradients relative to the level of information availability desired by the end of FY2000. The level of information availability will be measured beginning in FY2000. **(Weight = 5%)**

Basis for Rating:

Good: The procurement related information needs of employees and a comparison to procurement related information currently available to employees have been identified and baselined. Gradients for reducing the gap in FY2000 have been developed.

Excellent: The requirements for a Good rating are met. In addition, the documentation provides clear evidence that the gap reduction effort will be fully deployed during the First Quarter of FY2000.

Outstanding: The requirements for an Excellent rating are met. In addition, the documentation provides clear evidence that the gap reduction effort will be fully deployed on October 1, 1999.

Assumptions:

Information is considered available if it is current or requires only minor revision and the information is in compliance with Prime Contract requirements.

The following formula shall be applied to measure the level of information availability:

$$\text{Level of Information Availability} = \frac{\text{Number of Information Items Available}}{\text{Number of Information Items Needed}}$$

$$\text{Gap (\%)} = 100\% - \text{Level of Information Availability (\%)}$$

Performance Narrative:

The entire Procurement staff worked this year to baseline the level of information required and available. The baselining process consisted of identifying the total information required to perform the function; identifying the current information available; and comparing and determining the shortfall between the information required and currently available. Procurement's information-gathering process consisted of surveys, compiling the information in a matrix, formulating the baseline, and developing a plan and milestone schedule. The Procurement staff identified a total of 5 information items not available out of 100 information items necessary to perform their function. Procurement submitted the developed plan and schedule for reducing the information gap. Goals and gradients for FY 2000 were submitted, agreed to by the Parties, and full deployment began.

Performance Rating (Adjectival)**: Outstanding**	95.00%

Performance Objective: #4 Managing Financial Aspects

The Laboratory shall ensure optimum cost efficiency of purchasing operations. **(Weight = 10%)**

Criteria: 4.1 Process Cost

Operating costs as a percentage of total procurement dollars obligated will be tracked and trended. **(Weight = 10%)**

Performance Measure: 4.1.a Cost to Spend Ratio

The Laboratory's operating costs (labor plus overhead) will be divided by purchasing obligations. The Procurement organization will use FY99 projections and FY98 actuals to establish goals and gradients no later than December 1, 1998. **(Weight = 10%)**

Basis for Rating:

In partnership with DOE and UC, the Laboratory shall establish and justify gradients for the FY99 Cost to Spend Ratio measurement.

Assumptions:

The following formula shall be applied to measure the cost to spend ratio:

$$\text{Cost to Spend Ratio} = \frac{\text{Purchasing Organization Cost}}{\text{Total Purchasing Obligations}}$$

Performance Narrative:

The following are the DOE, LBNL, and UC agreed to goals, and gradients:

Baseline: 1.23 percent
Gradient: Good 1.61 – 1.70 percent
Excellent 1.41 – 1.60 percent
Outstanding 1.40 percent or better

Procurement's cumulative cost-to-spend ratio result is 0.99 percent. This ratio ranks as one of the lowest in the DOE complex. The 0.99 percent exceeds the CAPS benchmark of 2.9 percent for all DOE Contractors and could be considered "best-in-class." This year's ratio exceeds LBNL's cost-to-spend ratio of 1.23 percent achieved in FY 1998.

Performance Rating (Adjectival)**: Outstanding**	95.00%

Performance Area: PROPERTY MANAGEMENT

Property Management will employ the Property Performance Assessment Model (PPAM) for FY99. Each Property Management organization will finalize its final assessment plan with DOE and UC by September 30, 1998. This plan will cover performance thresholds, performance ranges (gradients), specific scoring criteria, frequency of reporting, and frequency of scoring.

In this Model points are used to determine the score for each activity. Weights and the corresponding points are shown below at the Objective, Criteria, and Measure levels. At the Basis for Rating level total possible points for each activity are shown below. Overall ratings will be based on the following (where a total weight of 100% is equal to 500 points):

>= 475 Outstanding
>= 450 Excellent
>= 400 Good
>= 352 Marginal
< 352 Unsatisfactory

The Adjectival Rating and Contractual Score will be assigned using the Property Management Scoring Table (see Exhibit I).

Performance Objective: #1 Accountability for Equipment, Sensitive Property, and Precious Metals

The Laboratory shall ensure accountability for equipment and sensitive personal property and precious metals. **(Weight = 60%/Total Points = 300)**

Criteria: 1.1 Accountability for Equipment, Sensitive Property and Precious Metals

The Laboratory shall conduct successful personal property and precious metal inventories as established in its inventory planning. **(Weight = 45%/Total Points = 225)**

Performance Measure: 1.1.a Property and Precious Metals Accounted For

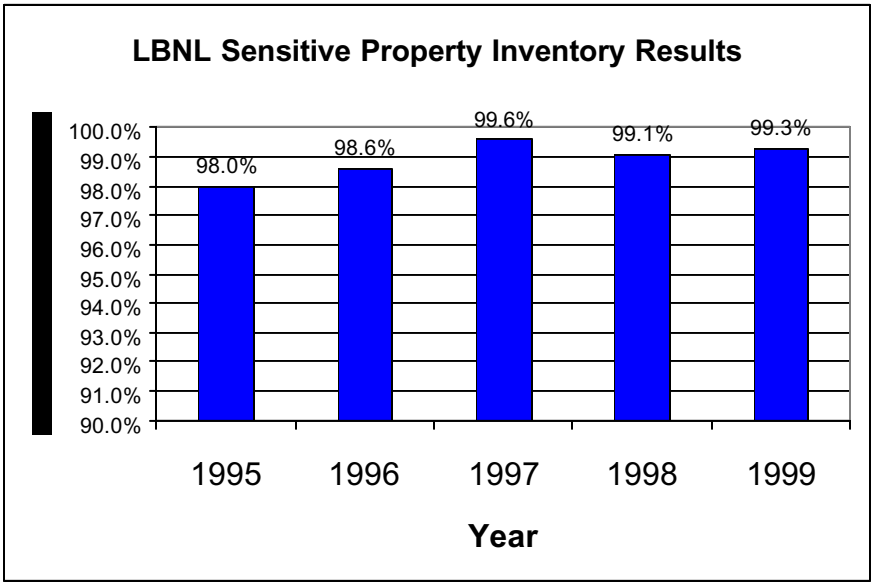
The percentage of personal property and precious metals accounted for, as described in the approved inventory plans, will be measured. **(Weight = 45%/Total Points = 225)**

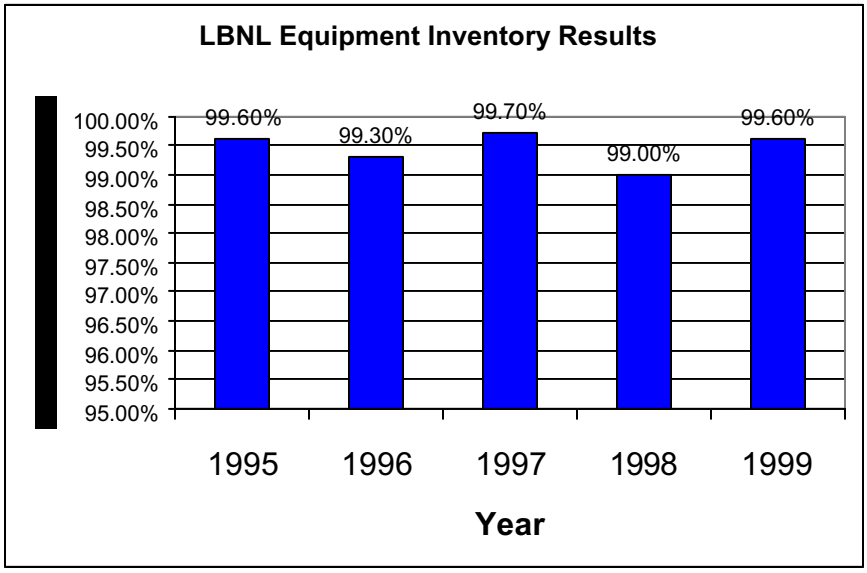
Basis for Rating:

The Property Performance Assessment Model (see Exhibit II), provides the activities to be measured, point value for each activity, frequency of reporting, and performance ranges (gradients).

Performance Narrative:

During FY 1999, Lawrence Berkeley National Laboratory (LBNL) conducted a successful statistical sample inventory. Find rates of 99.3 percent and 99.6 percent were achieved for sensitive property and equipment, respectively. The OAK Organizational Property Management Officer (OPMO) participated on a follow-up statistical validation of the inventory during which all but one item of sensitive property was located and all equipment items were located. The FY 1999 LBNL inventory process benefited from much improved planning and implementation as well as greatly improved senior management support. In addition, during FY 1999, LBNL accounted for all precious metals, with no unexplained losses. During the rating period, the OAK OPMO participated on a LBNL Precious Metals inventory validation.





Performance Rating (Adjectival)**: Outstanding**	215	95.60%

Criteria: 1.2 Identification of Items Subject to Inventory

The Laboratory will ensure personal property items which are subject to inventory are accurately identified. **(Weight = 15%/Total Points = 75)**

Performance Measure: 1.2.a Accuracy of Identification

The percentage of items accurately identified in the property database will be measured. **(Weight = 15%/Total Points = 75)**

Basis for Rating:

The Property Performance Assessment Model (see Exhibit II), provides the activities to be measured, point value for each activity, frequency of reporting, and performance ranges (gradients).

Performance Narrative:

During the FY 1999 rating period, LBNL greatly improved performance in the area of property identification. Three elements which contributed to the Laboratory's performance in this area are: percentage of property tagged when received, percentage of tagging in the field completed within 15 days, and property identified in the database during floor-to-database sampling.

LBNL was able to tag 100 percent of the 1,738 items received during the year at the point of receipt. This performance improved greatly from 1998 which was at 93 percent. Of the 106 items not tagged in receiving, which required tagging in the field, 87.7 percent were tagged in the field within 15 days after notification. This is a notable improvement over last year's performance which was at 64.9 percent. Although still falling below the target performance of 90 percent, this improvement is recognized as an important accomplishment as this critical procedure reduces the time that items are not under property management controls. During the performance period, 99 percent of the items sampled during the floor-to-database sample validation were identified as being in the database.

Excellent performance in these critical areas leads to a high degree of confidence in the reliability and accuracy of data in the LBNL property management database.

Performance Rating (Adjectival)**: Excellent**	65	86.70%

Performance Objective: #2 Stewardship Over Personal Property

The Laboratory shall ensure that both stewardship and custodianship for personal property is maintained. **(Weight = 20%/Total Points = 100)**

Criteria: 2.1 Organizational Stewardship and Individual Accountability

The Laboratory will ensure organizational and individual accountability (stewardship and custodianship, respectively) for property. **(Weight = 20%/Total Points = 100)**

Performance Measure: 2.1.a Timeliness of Assignment

The accountable individual is identified for equipment and sensitive property, and the timeliness of such identification is measured. **(Weight = 20%/Total Points = 100)**

Basis for Rating:

The Property Performance Assessment Model (see Exhibit II), provides the activities to be measured, point value for each activity, frequency of reporting, and performance ranges (gradients).

Performance Narrative:

During FY 1999, LBNL was able to greatly improve overall performance in the critical area of personal accountability. LBNL assigned 93.5 percent of initial custodians within 60 days of receipt during the 1999 performance period. This is a significant improvement over last year's performance of 77.3 percent. This is an important performance indicator in that it is recognized that the timely assignment of a property custodian is a critical element in achieving personal accountability for newly acquired property. Another very important process in ensuring accountability is maintaining the on-going accuracy of custodial assignments. Based on random sampling, LBNL achieved 91.5 percent custodial assignment accuracy for sensitive property and 97.6 percent accuracy of custodial assignment for equipment. These are both significant improvements over last year's performance of 75.5 percent for sensitive assignment accuracy and 66.2 percent for equipment assignments. This area was considered one of the most critical weaknesses in the 1998 LBNL property management performance.

Performance Rating (Adjectival): **Excellent**	83	83.00%

Performance Objective: #3 Vehicle Utilization

The Laboratory shall have a program to manage its vehicle fleet. **(Weight = 5%/Total Points = 25)**

Criteria: 3.1 Fleet Management

The Laboratory shall manage its fleet to ensure appropriate vehicle utilization.
(Weight = 5%/Total Points = 25)

Performance Measure: 3.1.a Vehicle Utilization

The Laboratory shall measure the percentage of total eligible vehicles meeting local utilization criteria.
(Weight = 5%/Total Points = 25)

Basis for Rating:

The Property Performance Assessment Model (see Exhibit II), provides the activities to be measured, point value for each activity, frequency of reporting, and performance ranges (gradients).

Performance Narrative:

Management of motor vehicle utilization is a critical element of an overall effective motor vehicle program. It is critical to ensuring that fleet size is maintained at the minimum number of vehicles needed to meet program requirements. In 1998, LBNL implemented new motor vehicle utilization criteria which was continued during FY 1999. Based on the established 200 miles per month criteria, LBNL achieved 131.5 percent utilization of essential vehicles, and 125.5 percent utilization for discretionary vehicles.

Performance Rating (Adjectival): **Outstanding**	25	100.00%

Performance Objective #4 Information to Improve/Maintain Processes (Systems Evaluation)

The Laboratory ensures that Property Management programs are consistent with policies and procedures approved by DOE. **(Weight = 10%/Total Points = 50)**

Criteria: 4.1 Self-Assessment of Policies and Procedures

The Laboratory shall plan, conduct, document, and report annually, the results of a successful property management system evaluation. **(Weight = 10%/Total Points = 50)**

Performance Measure: 4.1.a Assessing Support Processes

The property processes shall be measured against identified system evaluation criteria established in the plan. **(Weight = 10%/Total Points = 50)**

Basis for Rating:

The Property Performance Assessment Model (see Exhibit II), provides the activities to be measured, point value for each activity, frequency of reporting, and performance ranges (gradients).

Performance Narrative:

The purpose of the self-assessment program is the evaluation of operational compliance of the LBNL Property Management program against DOE approved LBNL policies and procedures. During FY 1999 three areas were addressed by the LBNL Self Assessment: Personal Property programs, Excess, and Storage. Based on the results of the assessment, all points were awarded except in the areas of personal property loans, and excess property processing. LBNL was able to renew only 46 of 77 pieces of property on expired loan agreements within the specified 90-day time frame. In addition, LBNL failed to meet its goal for evaluating excess property received within five days of receipt at the warehouse. Of the positive points highlighted by the assessment, the successful storage review of Equipment Held for Future Projects is perhaps the most noteworthy. The FY 1999 review resulted in 100 percent response from storage requestors and a significant reduction of items in long term storage, either through disposal and reuse.

Performance Rating (Adjectival): **Excellent**	42	84.00%

Performance Objective: #5 Customer Alignment

The Laboratory shall ensure that there is a property management program for identifying and evaluating customer needs and for building and maintaining positive customer relations.

(Weight = 5%/Total Points = 25)

Criteria: 5.1 Monitoring Customer Alignment

The Property Management organization shall ensure that the property management programs are responsive to customer expectations. **(Weight = 5%/Total Points = 25)**

Performance Measure: 5.1.a Aligning Customer Expectations

The Laboratory will have processes in place to monitor customer expectations of property management tools and products with regard to ease of use, timeliness, accuracy, and certainty.

(Weight = 5%/Total Points = 25)

Basis for Rating:

The Property Performance Assessment Model (see Exhibit II), provides the activities to be measured, point value for each activity, frequency of reporting, and performance ranges (gradients).

Performance Narrative:

During FY 1999, LBNL utilized Property Representative meetings and a survey for obtaining customer feedback. Issues addressed were: ease of use of the database, timeliness, accuracy, and customer confidence in the LBNL property management program. Of the 65 percent who responded to the survey, 50 percent indicated that they were confident that property transactions are actually updating the database, 75 percent of respondents indicated that the LBNL Property Management staff was timely in responding to inquiries, 65 percent indicated they have confidence in the custodial assignment report, and 74 percent indicated that they are confident in the information provided by the Property staff. These survey results are significant because they reflect a great improvement in the confidence and satisfaction levels of LBNL employees with the Property Management program.

Performance Rating (Adjectival): **Outstanding**	25	100.00%

Performance Objective: #6 Balancing Performance and Cost

The Laboratory ensures that property is managed appropriately to balance performance and cost. **(Weight = 0%/Total Points = 0)**

Criteria: 6.1 Balancing Performance/Cost Ratios

The Laboratory shall ensure that property processes/products are provided in the most cost efficient manner while maintaining desired levels of performance. **(Weight = 0%/Total Points = 0)**

Performance Measure: 6.1.a Measuring Cost Efficiency/Effectiveness

The Laboratory shall measure its ability to effectively balance property management costs and performance. **(Weight = 0%/Total Points = 0)**

Basis for Rating:

The Property Performance Assessment Model (see Exhibit II), provides the activities to be measured, point value for each activity, frequency of reporting, and performance ranges (gradients). The matrix provided below will be used to score the selected activities.

Assumption:

Where properly justified and approved by DOE, the Laboratory may elect to establish a measure that extends over two evaluation periods. The first year the Laboratory will submit a plan outlining the approach to be employed in establishing an appropriate baseline and developing the gradients for the following evaluation period. Approach and deployment of the plan will be evaluated the first year. The final milestone of the plan will be to develop gradients for results desired by the end of the second year. These gradients will be the basis for evaluation in the second evaluation period.

GRADIENT:

	Performance Level			
Cost Vs Baseline Plan Developed Each Year	**Higher Gradient or Outstanding**	**Same Gradient**	**Lower Performance and Not Less Than Good**	**Lower Performance and/or Less Than Good**
Less Cost	Outstanding	Excellent	Good	Marginal
Same Cost	Excellent	Good	Marginal	Unsatisfactory
More Cost	Good	Marginal	Unsatisfactory	Unsatisfactory
More Cost More Requirements	**Renegotiate Performance Gradients for Critical Activities**			

Performance Narrative:

Prior to the FY 1999 performance period, agreement between DOE, UCLAO and LBNL was reached that LBNL would not be graded in the cost/performance area in order to redistribute points to the inventory measure. However, LBNL did take actions to make the following improvements to increase performance cost efficiency. Implementation of the Sunflower database enabled LBNL to immediately update property records for assets received at the warehouse, to review other applicable records, and allowed for a more expeditious excess procedure. Greater efficiencies in the storage operation are to be evaluated in the future but will require some reprogramming of the Sunflower database system.

It is anticipated that LBNL will be a position to return to the complete PPAM model in the future, which will include full participation and grading in this area.

No FY 99 rating is provided for this measure.

Performance Objective: #7 Organizational Vitality

The Laboratory shall ensure that there is a program for achieving and maintaining organizational vitality in the property management organization. **(Weight = 0%/Total Points = 0)**

Criteria: 7.1 Evaluation of Organizational Agility and Employee Alignment

The Laboratory will foster organizational agility and employee alignment in its property management organization. **(Weight = 0%/Total Points = 0)**

Performance Measure: 7.1.a Measuring Organizational Agility and Employee Alignment

The Laboratory will have a process in place to measure organizational vitality as well as to understand and address workforce expectations. **(Weight = 0%/Total Points = 0)**

Basis for Rating:

The Property Performance Assessment Model (see Exhibit II), provides the activities to be measured, point value for each activity, frequency of reporting, and performance ranges (gradients).

Performance Narrative:

Prior to the FY 1999 performance period, agreement between DOE, UCLAO and LBNL was reached that LBNL would not be graded in the Organizational Vitality area, in order to redistribute points to the inventory measure. However, during the FY 1999 rating period, LBNL took steps to address this area by the following: Property Management employee position descriptions were modified to incorporate PPAM responsibilities, and Individual Development Plans. Ergonomic evaluations of 50 percent of the Property Management staffs' workstations were performed, as well as semi-annual safety team reviews of work areas.

It is anticipated that LBNL will be a position to return to the complete PPAM model in the future, which will include full participation and grading in this area.

No FY 99 rating is provided for this measure.

EXHIBIT I
PROPERTY MANAGEMENT
SCORING TABLE

PPAM Points Earned	Translation to Appendix F Contractual Scoring	Adjectival Rating
493-500	98	**Outstanding**
484-492	95	
475-483	92	
469-474	88	**Excellent**
460-468	85	
450-459	82	
433-449	78	**Good**
417-432	75	
400-416	72	
384-399	68	**Marginal**
368-383	65	
352-367	62	
336-351	58	**Unsatisfactory**
320-335	55	
304-319	52	

EXHIBIT II

BERKELEY LABORATORY

Property Performance Assessment Model

Customer Satisfaction = The Quality of the Product + The Quality of the Process

FY99	Measured Activities / Sub-Gauges (Activity/Support Processes)	BSC Ref*	Report Frequency	Gradient 80/90/100	Value of Activity	Activity Score	Core Measures (Critical Activity)	Total Points for Activity	Desired Outcomes (Final Product)	FY99
PRODUCT QUALITY										
1.1.a	**The Quality of the Personal Property**									
1.1.a.1	% of sensitive inventory items located by acquisition value (per approved plan).	C.1/L.1	Annually	98.7/99.2/99.	100		Property and Precious Metals Accounted For	225	Accountability for Equipment and Sensitive Property and Precious Metals	300
1.1.a.2	% of equipment inventory items located by acquisition value (per approved plan).	C.1/L.1	Annually	98.7/99.2/99	100					
1.1.a.3	% of precious metals accounted for by weight in grams.	C.1/L.1	Annually	99.0/99.6/99.	25					
1.2.a	**The Quality of the**									
1.2.a.1	% of property tagged when received.	C.1	Quarterly	90.0/95.5/98.	25		Identification	75		
1.2.a.2	% of tagging requests completed by field personnel within 15 days.	C.1/.3/I.1	Quarterly	90.0/95.5/98.	25					
1.2.a.3	% of property identified in database (floor-to-database sampling).	C.1/.3/I.1	Quarterly	90.0/95.5/98.	25					
2.1.a	**Accountabilit**									
2.1.a.1	% of accurate custodian assignments for sensitive property.	C.1	Quarterly	90.0/95.5/98.	30		Accountability	100	Stewardship	100
2.1.a.2	% of accurate custodian assignments for equipment.	C.1/C.3	Quarterly	90.0/95.5/98.	30					
2.1.a.3	% of initial custodians assigned within 60 days.	C.1/C.3	Quarterly	90.0/95.5/98.	40					
3.1.a	**Vehicle**									
3.1.a.1	% of essential vehicles meeting utilization criteria.	C.1/L.2	Quarterly	90.0/95.5/98.	12		Fleet Management	25	Vehicle Utilization	25
3.1.a.2	% of discretionary vehicles meeting utilization criteria.	C.1/L.2	Quarterly	90.0/95.5/98.	13					
PROCESS QUALITY										
4.1.a	**Self-Assessment/Support**									
4.1.a.1	Evaluation of Personal Property programs including High Risk Program.	1.1/I.3	Quarterly	Scoresheet	34		Self-Assessment of Policy and Procedures	50	Information to Improve/Maintain Processes (Systems Evaluation)	50
4.1.a.2	Evaluation of Excess program.	C.1	Quarterly	Scoresheet	8					
4.1.a.3	Evaluation of Storage program.	C.1	Quarterly	Scoresheet	8					
5.1.a	**Customer Surveys/Products and**									
5.1.a.1	Were the methods to determine customer satisfaction accomplished as outlined in the plan? Ease of Use • Timeliness • Accuracy • Certainty •	C.1-2/L.1	Quarterly	Yes/No	25		Process for Understanding Our Customers' Expectations and Perceptions	25	Customer Alignment	25
6.1.a	**Cost/Performance (Cost =** 1) Cost to Use, 2) Cost to									
6.1.a.1	Processing Excess Property	F.1/2:C.1/2	Quarterly	Scoresheet	0		Balancing Product Output/ Customer Satisfaction/ Cost Ratios	0	Balancing Performance and Cost	0
6.1.a.2	Supporting the Storage Activity	F.1/2:C.1/2	Quarterly	Scoresheet	0					
WORKPLACE QUALITY										
7.1.a	Employee Effectiveness						Evaluation of Organizational Agility and Employee Alignment	0	Organizational Vitality	0
7.1.a.1	Staff & Organizational Capability	L.1/L2	Quarterly	Scorecard	0					
								500		

BSC References:
C = Customer
I = Internal Business
L = Learning &
F =

>= 475 Outstanding
>=450 Excellent
>=400 Good
>=352 Marginal
<352 Unsatisfactory

Appendices

Report Methodology

APPENDIX F - OBJECTIVE STANDARDS OF PERFORMANCE

This report provides the Contracting Officer's Fiscal Year 1999 written assessment and evaluation of the Contractor's self-assessment of performance in its management and operation of LBNL for DOE under Contract Clause 2.6, Performance Based Management. The Contractor and DOE have agreed to use a performance-based management system for oversight at the Laboratory. Annual Standards of Performance under contract, Appendix F are used for the appraisal and evaluation of work under contract and is supported by a system that includes: (1) the utilization of self-assessment and integrated oversight methodologies, systems, and processes to enhance operational efficiency and performance effectiveness; (2) the use of peer review and self-assessment in the appraisal and evaluation of science and technology/programmatic performance; and, (3) such other administrative processes and procedures as the Parties may mutually agree to, from time to time, as they deem necessary to effect the intent of Contract Clause 2.6 and Appendix F. Self-assessments are the principal means by which the Contractor evaluates compliance with the performance objectives described in Appendix F. DOE OAK validates against the self-assessment and evaluates the Contractor's performance. The validation effort is conducted by teams responsible for the various functional areas represented in Appendix F. These teams, with guidance from DOE OAK management, are responsible for developing an adequate, independent basis for assessing the quality, credibility, and accuracy of the Contractor's self-assessment; and a basis for DOE OAK's written assessment and evaluation of the Contractor's performance.

This report meets the following contract requirements:

- Provide a summary of the results from the conduct of the DOE OAK validation program and evaluation of performance of work under contract as required by Clause 2.6.

- Provide a written assessment of the Contractor's performance under the contract based upon the DOE OAK appraisal program and the Contracting Officer's evaluation of the Contractor's self-assessment as required by Clause 2.6(e).

- Provide the basis for determination of the Contractor's Program Performance Fee, as required by Clause 5.3.

- Provide the basis for determination of the Senior Management Salary Increase Authorization (SIA) Multiplier as required by Section III, paragraph (f), (6) and (8) of Appendix A and Section C, Part III of Appendix F.

1. Appendix F Components of Laboratory Evaluation Process

The first component of the performance evaluation process is the evaluation of Science and Technology/Programmatic performance. The University of California President's Council on the National Laboratories performs a peer review and evaluates the quality of science and technology at the Laboratory. The Council prepares a report that the University's Laboratory Affairs Office uses to develop an adjectival and numeric rating for the evaluation of Science and Technology at the Laboratory. DOE Headquarters (DOE HQ) program managers and their DOE OAK counterparts validate the Science and Technology self-assessment.

The second component of the performance evaluation process is the annual Contractor self-assessment of the operations and administrative systems at LBNL included in Section B of Appendix F. The results of this self-assessment and proposed corrective action plans are then presented to the University of California, Laboratory Administration Office (UCLAO) by the Laboratory. This becomes the foundation for the Contractors self-assessment.

UCLAO management also evaluates the administrative systems for the Laboratory using the self-assessments and corrective action plans provided by the Laboratory and the established Appendix F performance measures. UCLAO establishes an aggregate "rating" for the Laboratory based on the evaluation of each functional area and combines this result with the ratings for Science and Technology for a total adjectival and numeric rating.

DOE OAK reviews and validates Contractor performance against the established Appendix F performance objectives, the UCLAO rating of the Laboratory self-assessment, and corrective action plans. This effort is accomplished by teams reflecting expertise in the various functional disciplines required by the Appendix F administrative and operational systems. All teams have the opportunity to observe the Laboratory's independent evaluation of its self-assessment. This report is the product of their review and validation of the Contractor's performance. The primary objective of this report is to provide the annual Contracting Officer's written assessment of the Contractor's performance under the contract. This report also provides the basis for determination of the amount of earned Program Performance Fee in accordance with Contract terms.

2. Self-Assessment Period

Designed to capture performance for Fiscal Year 1999, the self-assessment period for the Laboratory is October 1, 1998 through September 30, 1999, unless specified in the Performance Objective. Significant performance between the later date and the end of the Fiscal Year is to be assessed by the Laboratory and provided as a supplement to the self-assessment. The Laboratory provided its self-assessment to UC on October 1, 1999. The Contractor provided the self-assessment of LBNL and proposed rating to DOE OAK on November 1, 1999.

The Contractor and DOE agreed to use the following table for adjectival graded and numeric scoring:

DOE-UC Rating Adjectives

Percentage Range	Adjectival Description	Definition
100-90 %	Outstanding	Significantly exceeds the standard of performance; achieves noteworthy results; accomplishes very difficult tasks in a timely manner
89-80 %	Excellent	Exceeds the standard of performance; although there may be room for improvement in some elements, better performance in all other elements offset this
79 - 70 %	Good	Meets the standard of performance; assigned tasks are carried out in an acceptable manner - timely, efficiently, and economically. Deficiencies do not substantively affect performance.
69- 60 %	Marginal	Below the standard of performance; deficiencies are such that management attention and corrective action are required.
< 60 %	Unsatisfactory	Significantly below the standard of performance; deficiencies are serious, and may affect overall results, immediate senior management attention, and prompt corrective action is required.

3. **Methodology for Validation of Numerical Scoring for Contractor Self-Assessment - Science & Technology (S&T) FY 1999**

a. **Introduction**

The programmatic assessment of the Contractor is based upon the use of peer review and self-assessment in the appraisal and evaluation of S&T/Programmatic Performance; and validated by DOE HQ and OAK program managers. Using the programmatic assessment, the ratings for the science and technology are decided using the rating table below. To convert the adjectival rating to an equivalent numerical (percentage) score, the methodology outlined below is utilized.

b. **Methodology**

For each programmatic assessment and defined by the Parties appraisal area for FY 1999, a specific number is applied, as follows:

Scoring Crosswalk Table

Adjectival Rating	Range	Score
Outstanding	100-90 %	95
Excellent	80-89 %	85
Good	70-79 %	75
Marginal	60-69 %	65
Unsatisfactory	59 ↓ %	55

Example

Science and Technology	Adjectival Rating	Numeric Score	Weight	Weighted Score
Biology and Biotechnology	**Outstanding**	**91.67**	**0.03**	**2.75**
Criteria 1	Excellent	85		
Criteria 2	Outstanding	95		
Criteria 3	N/A			
Criteria 4	Outstanding	95		

(85 + 95 + 95 = 275/3=91.67=Outstanding)

The scoring range table is used because averaging yields results other than 95, 85, 75, 65, 55.

The overall score for the Science and Technology/Programmatic performance assessment is calculated by totaling the scores from each Research and Development (R&D) Directorate. All Directorates are not weighted equally in the calculation of the overall Science and Technology score. DOE adopted the weights used by the Contractor in their Science and Technology self-assessment at the Directorate level. The weights are created using a balance between program budget and Full-Time Employees (FTEs). Thus, appraisal results for Directorates with a greater amount of resources are more heavily weighted than Directorates with a smaller number of resources.

DOE OAK weights all four criteria equally within each LBNL Directorate.

The weighted scores in the programmatic appraisal areas are totaled and the resulting percentage is assigned an adjectival rating based on the scoring range in the Scoring Crosswalk Table. Thus, for FY 1999, S&T's weighted score is 93.4 percent, which equates to an outstanding adjectival rating. 93.4 percent of 500 when rounded equals 467 points for FY 1999. (See Appendix B - FY 1999 Science and Technology Scores.)

4. **Appendix F Appraisal Component Methodology**

The DOE OAK Functional Teams validate the Contractor's self-assessment on quality, accuracy, and credibility, and consider other sources of information, reviews, or tests. From this process the teams recommend a numeric and adjectival rating of the Contractor's performance. For Science & Technology the methodology is the same with a heavy reliance on assessment from DOE HQ program offices.

(i) Operation and Administration Functional Areas

The Parties agree that the operational area of "Environment, Safety and Health," is weighted at approximately 60 points over the other functional areas. All other operations and administration functional areas are equal at 50 points except for Environment Restoration and Waste Management, which is weighted at 40 points.

(ii) Performance Objectives

The Parties establish the weights to be assigned at the performance objective and criteria level within the functional teams.

(iii) Performance Objectives Not Accomplishable During the Rating Period

The methodology used by DOE OAK is to assess these performance objectives where there is enough information available to render an assessment of Contractor performance. In cases where a performance assessment can not be made, it is decided to not rate the performance

objective. In such cases the performance objective's weight is maintained, if feasible, by reassigning the performance criteria weights within that performance objective. If that is not possible the weight of the objective is added proportionately to other performance objectives in the functional area.

(iv) Sources of Information

The initial source of information about performance was obtained from the Contractor self-assessment and evaluation. Sources of information used by DOE to validate the credibility and conclusions of the self-assessment and the review of the self-assessment included, but were not limited to:

- Functional appraisals conducted by line and functional managers with input from Headquarters, as appropriate.
- Assessment Management Plans for Operational oversight of the Contractor that include in their scope Appendix F performance objectives.
- Daily operational awareness activities, including interactions, walk-throughs, management meetings or other modes of formal and informal contact with the Contractor.
- External and internal audits and evaluations, such as GAO/OIG reviews, ES&H assessments, Inspections and Evaluations, etc.
- Review and validation efforts of Appendix F measures during the two-week performance assessment review of the Contractor.

(v) **Factual Accuracy Check**

A draft of the performance narrative of this report was provided to UC on December 14, 1999, to check the factual accuracy of its contents. The University returned its comments on December 17, 1999.

PERFORMANCE APPRAISAL - APPENDIX C - OPERATIONS AND ADMINISTRATION SCORING

Column 1: **POINTS -** represents the total points allocated for the entire functional area. For example, the functional area of Laboratory Management is allocated 50 points of the 500 point

total for all of the administration/operations section. This is the first tier for the weightings of each functional area; all other weightings within a functional area are sub-ordinate to this overall weight [or points available.]

All functional areas are not equal to each other; they are weighted using a hierarchical method. For example, in FY 1999, the functional area of Environmental Restoration and Waste Management is allocated a total of 40 points; all other areas are allocated 50 points, with the exception of Environment, Safety and Health, which is allocated 110 points.

While column 1 (points) represents the total points available for that functional area, the total points available are further broken down [or allocated] by performance objective(s), and within each objective, by criteria and the actual performance measure(s).

Column 2: **SCORE** - represents the total points received, through the DOE evaluation process, for each functional area for the fiscal year. For example, if a functional area has 30 points available, the DOE evaluation would result in a numeric score of 30 or less. Thus, it represents the final scoring for the functional area. The summation of column 2 results in the overall score for Administration/Operations functional areas.

Column 3: **PERCENT** - represents the numeric score, expressed as a percentage of total points available. In the above example of a functional area with 30 points, if the functional area received 26 points, this would equate to 87 percent.

Unique Methodology for Property Management Scores

DOE OAK has used specific, unique methodology only applicable to the property management performance area in calculating the overall score, percent and adjectival rating for the FY 1999 performance. The Parties agree upon the use of a rating table designed to identify a range of **(PPAM)** points earned and the translation of such points to a numeric scoring for the purposes of the Appendix F performance rating for FY 1999. (See Property Scoring Table).

FY 1999 Appendix F
Property Scoring Table

PPAM Points Earned	Translation to Appendix F Contractual Scoring	Adjectival Rating
493-500	98	Outstanding
484-492	95	
475-483	92	
469-474	88	Excellent
460-468	85	
450-459	82	
433-449	78	Good
417-432	75	
400-416	72	
384-399	68	Marginal
368-383	65	
352-367	62	
336-351	58	Unsatisfactory
320-335	55	
304-319	52	

Using the PPAM model, Property Management could earn from 0 up to 500 points in their performance. If the Contractor earns 480 points (performance in the range of 475 - 483) falls into the category of 92 percent for an outstanding adjectival rating. (Even though mathematically, the total scores for each element adds up to 43.1 out of a possible 45 points, or 95.9%).

Senior Management Salary Increase Authorization Multiplier – The total points earned in the performance of Science and Technology and Operations and Administration are used to determine the SIA. Using the table (in section C, Part III of Appendix F). The total points earned correspond to the agreed numeric equivalent. The numeric equivalent is used as a multiplier of each Senior Management merit pool.

Appendix B - Science and Technology Scores
Lawrence Berkeley National Laboratory

SCIENCE AND TECHNOLOGY		ADJECTIVAL RATING	NUMERIC SCORE	FUNDING	WEIGHT	WEIGHTED SCORE
BIOMEDICAL AND ENVIRONMENTAL RESEARCH		**OUTSTANDING**	**95.0**	**39.2**	**0.16**	**14.96**
Criteria 1	Quality of Science	Outstanding				
Criteria 2	Relevance to National Needs and Agency Missions	Outstanding				
Criteria 3	Performance in the Technical Development and Operation of Major Research Facilities	Outstanding				
Criteria 4	Programmatic Performance and Planning	Outstanding				
BASIC ENERGY SCIENCES		**OUTSTANDING**	**95.0**	**66.1**	**0.27**	**25.23**
Criteria 1	Quality of Science	Outstanding				
Criteria 2	Relevance to National Needs and Agency Missions	Outstanding				
Criteria 3	Performance in the Technical Development and Operation of Major Research Facilities	Outstanding				
Criteria 4	Programmatic Performance and Planning	Outstanding				

Appendix B - Science and Technology Scores
Lawrence Berkeley National Laboratory

SCIENCE AND TECHNOLOGY		ADJECTIVAL RATING	NUMERIC SCORE	FUNDING	WEIGHT	WEIGHTED SCORE
COMPUTING SCIENCES		**OUTSTANDING**	**95.0**	**55.5**	**0.22**	**21.18**
Criteria 1	Quality of Science	Outstanding				
Criteria 2	Relevance to National Needs and Agency Missions	Outstanding				
Criteria 3	Performance in the Technical Development and Operation of Major Research Facilities	Outstanding				
Criteria 4	Programmatic Performance and Planning	Outstanding				
NUCLEAR PHYSICS		**OUTSTANDING**	**95.0**	**23.0**	**0.09**	**8.78**
Criteria 1	Quality of Science	Outstanding				
Criteria 2	Relevance to National Needs and Agency Missions	Outstanding				
Criteria 3	Performance in the Technical Development and Operation of Major Research Facilities	Outstanding				
Criteria 4	Programmatic Performance and Planning	Outstanding				

Appendix B - Science and Technology Scores
Lawrence Berkeley National Laboratory

SCIENCE AND TECHNOLOGY		ADJECTIVAL RATING	NUMERIC SCORE	FUNDING	WEIGHT	WEIGHTED SCORE
HIGH ENERGY PHYSICS		**EXCELLENT**	**87.5**	**26.7**	**0.11**	**9.39**
Criteria 1	Quality of Science	Excellent				
Criteria 2	Relevance to National Needs and Agency Missions	Outstanding				
Criteria 3	Performance in the Technical Development and Operation of Major Research Facilities	Outstanding				
Criteria 4	Programmatic Performance and Planning	Good				
FUSION ENERGY SCIENCES		**OUTSTANDING**	**95.0**	**5.0**	**0.02**	**1.91**
Criteria 1	Quality of Science	Outstanding				
Criteria 2	Relevance to National Needs and Agency Missions	Outstanding				
Criteria 3	Performance in the Technical Development and Operation of Major Research Facilities	Outstanding				
Criteria 4	Programmatic Performance and Planning	Outstanding				

Appendix B - Science and Technology Scores
Lawrence Berkeley National Laboratory

SCIENCE AND TECHNOLOGY		ADJECTIVAL RATING	NUMERIC SCORE	FUNDING	WEIGHT	WEIGHTED SCORE
CIVILIAN RADIOACTIVE WASTE MANAGEMENT		**OUTSTANDING**	**91.7**	**9.4**	**0.04**	**3.46**
Criteria 1	Quality of Science	Excellent				
Criteria 2	Relevance to National Needs and Agency Missions	Outstanding				
Criteria 3	Performance in the Technical Development and Operation of Major Research Facilities	N/A				
Criteria 4	Programmatic Performance and Planning	Outstanding				
FOSSIL ENERGY		**EXCELLENT**	**85.0**	**4.1**	**0.02**	**1.40**
Criteria 1	Quality of Science	Excellent				
Criteria 2	Relevance to National Needs and Agency Missions	Excellent				
Criteria 3	Performance in the Technical Development and Operation of Major Research Facilities	Excellent				
Criteria 4	Programmatic Performance and Planning	Excellent				
ENERGY EFFICIENCY & RENEWABLES		**EXCELLENT**	**88.3**	**19.9**	**0.08**	**7.06**
Criteria 1	Quality of Science	Outstanding				
Criteria 2	Relevance to National Needs and Agency Missions	Excellent				

Appendix B - Science and Technology Scores
Lawrence Berkeley National Laboratory

SCIENCE AND TECHNOLOGY		ADJECTIVAL RATING	NUMERIC SCORE	FUNDING	WEIGHT	WEIGHTED SCORE
Criteria 3	Performance in the Technical Development and Operation of Major Research Facilities	N/A				
Criteria 4	Programmatic Performance and Planning	Excellent				
				248.9	**1.00**	**93.4**

ADJECTIVAL RATING	**OUTSTANDING**
PERCENTAGE SCORE	**93.4%**
APPENDIX F POINT SCORE	**467**

Appendix C - Operations and Administration System Scores Summary
Lawrence Berkeley National Laboratory

FUNCTIONAL AREA	POINTS POSSIBLE	SCORE	PERCENT	ADJECTIVE
LABORATORY MANAGEMENT	50	47.2	94.3%	Outstanding
ENVIRONMENT RESTORATION AND WASTE MANAGEMENT	40	36.7	91.8%	Outstanding
ENVIRONMENT, SAFETY & HEALTH	110	97.1	88.3%	Excellent
FACILITIES MANAGEMENT	50	46.1	92.3%	Outstanding
FINANCIAL MANAGEMENT	50	45.1	90.3%	Outstanding
HUMAN RESOURCES	50	37.6	75.3%	Good
INFORMATION MANAGEMENT	50	45.4	90.7%	Outstanding
PROCUREMENT	50	46.0	92.0%	Outstanding
PROPERTY MANAGEMENT	50	41.0	82.0%	Excellent
TOTAL	500	442	88.4%	Excellent

Appendix C - Operations and Administration System Scores

PERFORMANCE OBJECTIVE		POINTS	SCORE	PERCENT
LABORATORY MANAGEMENT		**50.0**	**47.2**	**94.3%**
PERFORMANCE OBJECTIVE #1 Laboratory Leadership	**(Weight =100%)**	**50.0**	**47.2**	**94.3%**
1.1 Institutional Stewardship and Viability	**(Weight = 100%)**	**50.0**	**47.2**	**94.3%**
1.1.a Planning		8.5	8.3	98.0%
1.1.b Establishing and Communicating Performance Expectations		8.3	7.9	95.0%
1.1.c Stewardship of Assets		8.3	7.9	95.0%
1.1.d Effective Resource Management		8.3	7.9	95.0%
1.1.e Community Relations		8.3	7.3	88.0%
1.1.f Accountability and Commitments		8.3	7.9	95.0%

Appendix C - Operations and Administration System Scores

PERFORMANCE OBJECTIVE	WEIGHT	SCORE	PERCENT
ENVIRONMENT RESTORATION AND WASTE MANAGEMENT	**40.0**	**36.7**	**91.8%**
PERFORMANCE OBJECTIVE #1 Environmental Restoration and Waste Management (Weight = 100%)	**40.0**	**36.7**	**91.8%**
1.1 Waste Management (Weight = 25%)	**10.0**	**9.7**	**96.8%**
1.1.a	4.0	3.8	95.0%
1.1.b	6.0	5.9	98.0%
1.2 EM Program Innovation (Weight = 25%)	**10.0**	**9.5**	**95.0%**
1.2.a Advancement of the EM Program	10.0	9.5	95.0%
1.3 Environmental Restoration (Weight = 25%)	**10.0**	**8.5**	**85.0%**
1.3.a Environmental Restoration	10.0	8.5	85.0%
1.4 Cost and Schedule Variances (Weight = 25%)	**10.0**	**9.1**	**90.5%**
1.4.a	5.0	4.6	92.0%
1.4.b	5.0	4.5	89.0%

Appendix C - Operations and Administration System Scores

PERFORMANCE OBJECTIVE		WEIGHT	SCORE	PERCENT
ENVIRONMENT, SAFETY & HEALTH		**110.0**	**97.1**	**88.3%**
PERFORMANCE OBJECTIVE #1 Do Work Safely	**(Weight = 100%)**	**110.0**	**97.1**	**88.3%**
1.1 Management Defines the Scope of Work Such That (ISM #1)	**(Weight = 10%)**	**11.0**	10.5	**95.0%**
1.2 Protection & Prevention Involves Analyzing the Hazards and Developing and Implementing Controls Such That (ISM #2/#3)	**(Weight = 10%)**	**11.0**	10.5	**95.0%**
1.3 Operational Requirements Guiding the Performance of Work Are Such That (ISM #4)	**(Weight = 10%)**	**11.0**	9.6	**87.0%**
1.4 Continuous Improvement to Achieve Excellence in ES&H is Accomplished Through (ISM #5)	**(Weight = 10%)**	**11.0**	10.1	**92.0%**
1.5 System Performance Measures	**(Weight= 60%)**	**66.0**	**56.5**	**85.7%**
1.5.a Routine Exposures from Routine Activities	**(Weight= 5%)**	5.5	5.2	95.0%
1.5.b Radiation Protection of the Public and the Environment	**(Weight= 5%)**	5.5	4.7	85.0%
1.5.c Prevention of Unplanned Radiation Exposures	**(Weight= 5%)**	5.5	5.4	98.0%
1.5.d Control of Radioactive Material	**(Weight= 5%)**	5.5	4.3	79.0%
1.5.e Chemical Exposure Prevention	**(Weight= 7%)**	7.7	6.9	90.0%
1.5.f Accident Prevention	**(Weight= 7%)**	7.7	5.3	69.0%
1.5.g Occupational Safety and Health	**(Weight= 7%)**	7.7	6.1	79.0%

Appendix C - Operations and Administration System Scores

1.5.h Tracking Environmental Incidents	**(Weight=9%)**	9.9	8.1	82.0%
1.5.I Waste Reduction and Recycling	**(Weight= 10%)**	11.0	10.5	95.0%

Appendix C - Operations and Administration System Scores

PERFORMANCE OBJECTIVE			WEIGHT	SCORE	PERCENT
FACILITIES MANAGEMENT			**50.0**	**46.1**	**92.3%**
PERFORMANCE OBJECTIVE #1	**Real Property Management**	**(Weight = 5%)**	**2.5**	**2.5**	**98.0%**
1.1	**Real Property Management**	**(Weight = 5%)**	**2.5**	**2.5**	**98.0%**
1.1.a	Program Implementation		2.5	2.5	98.0%
PERFORMANCE OBJECTIVE #2	**Physical Assets Planning**	**(Weight = 14%)**	**7.0**	**6.6**	**94.0%**
2.1	**Comprehensive Integrated Planning Process**	**(Weight = 14%)**	**7.0**	**6.6**	**94.0%**
2.1.a	Effectiveness of Planning Process		7.0	6.6	94.0%
PERFORMANCE OBJECTIVE #3	**Project Management**	**(Weight = 33%)**	**16.5**	**14.1**	**85.5%**
3.1	**Construction Project Performance**	**(Weight =20%)**	**10.0**	**9.5**	**95.0%**
3.1.a	Work Performed		10.0	9.5	95.0%
3.2	**Construction Project Cost**	**(Weight = 13%)**	**6.5**	**4.6**	**71.0%**
3.2.a	Total Estimated Cost (TEC)		6.5	4.6	71.0%
PERFORMANCE OBJECTIVE #4	**Maintenance**	**(Weight = 33%)**	**16.5**	**15.7**	**95.0%**
4.1	**Facility Management**	**(Weight = 13%)**	**6.5**	**6.2**	**95.0%**
4.1.a	Program Implementation		6.5	6.2	95.0%

Appendix C - Operations and Administration System Scores

4.2	**Maintenance Program**	**(Weight = 20%)**	**10.0**	**9.5**	**95.0%**
4.2.a	Maintenance Index		10.0	9.5	95.0%
PERFORMANCE OBJECTIVE #5	**Utilities/Energy Conservation**	**(Weight = 15%)**	**7.5**	**7.3**	**97.7%**
5.1	**Reliable Utility Service**	**(Weight = 8%)**	**4.0**	**4.0**	**100.0%**
5.1.a	Utility Service		4.0	4.0	100.0%
5.2	**Energy Consumption**	**(Weight = 2%)**	**1.0**	**1.0**	**95.0%**
5.2.a	Building Energy		1.0	1.0	95.0%
5.3	**Energy Management**	**(Weight = 5%)**	**2.5**	**2.4**	**95.0%**
5.3.a	Energy Goals		2.5	2.4	95.0%

Appendix C - Operations and Administration System Scores

PERFORMANCE OBJECTIVE			WEIGHT	SCORE	PERCENT
FINANCIAL MANAGEMENT			**50.0**	**45.1**	**90.3%**
PERFORMANCE OBJECTIVE #1	**Customer Focus and Satisfaction**	**(Weight = 15%)**	**7.5**	**6.7**	**89.7%**
1.1	**Methods to Evaluate Customer Expectations**	**(Weight = 5%)**	**2.5**	**2.2**	**89.0%**
1.1.a	Effectiveness of Methods		2.5	2.2	89.0%
1.2	**Customer Satisfaction**	**(Weight = 10%)**	**5.0**	**4.5**	**90.0%**
1.2.a	Customer Satisfaction Results		5.0	4.5	90.0%
PERFORMANCE OBJECTIVE #2	**Operational Effectiveness**	**(Weight =30%)**	**15.0**	**14.4**	**95.9%**
2.1	**Leadership in Improving Financial Management Efficiency and Effectiveness**	**(Weight = 17%)**	**8.5**	**8.2**	**96.6%**
2.1.a	Quality Performance in Reporting Process		2.5	2.5	98.0%
2.1.b	Leadership in Systems Improvements		6.0	5.8	96.0%
2.2	**Transaction Processing Improvements**	**(Weight = 13%)**	**6.5**	**6.2**	**95.0%**
2.2.a	Demonstration of Improvement		6.5	6.2	95.0%
PERFORMANCE OBJECTIVE #3	**Financial Stewardship and Integrity**	**(Weight = 40%)**	**20.0**	**17.2**	**86.0%**
3.1	**Cost and Commitments are Managed Properly**	**(Weight =10%)**	**5.0**	**3.9**	**78.5%**

Appendix C - Operations and Administration System Scores

3.1.a	Cost and Commitments are Controlled to Appropriate Funding Levels		2.5	1.7	69.0%
3.1.b	Control of Funds		2.5	2.2	88.0%
3.2	**Financial Management Practices**	**(Weight = 15%)**	**7.5**	**6.9**	**92.0%**
3.2.a	Financial Policies, Practices, Data, and Reports		7.5	6.9	92.0%
3.3	**Effective Internal Controls and Compliance**	**(Weight = 15%)**	**7.5**	**6.4**	**85.0%**
3.3.a	Internal Controls and Compliance Process Management		7.5	6.4	85.0%
PERFORMANCE OBJECTIVE #4	**Learning and Growth**	**(Weight = 15%)** **(Weight = 15%)**	**7.5**	**6.8**	**91.0%**
4.1	Work Force Management	**(Weight = 15%)**	**7.5**	**6.8**	**91.0%**
4.1.a	Effective Work Force Management		7.5	6.8	91.0%

Appendix C - Operations and Administration System Scores

PERFORMANCE OBJECTIVE			WEIGHT	SCORE	PERCENT
HUMAN RESOURCES			**50.0**	**37.6**	**75.3%**
PERFORMANCE OBJECTIVE #1	**Cost Effectiveness**	**(Weight = 32%)**	**16.0**	**12.9**	**80.6%**
1.1	**Review and Evaluation of HR Systems and Processes**	**(Weight = 11%)**	**5.5**	**4.7**	**85.0%**
1.1.a	Evaluation of HR Systems and Processes		5.5	4.7	85.0%
1.2	**Workforce Planning/Staffing**	**(Weight = 10%)**	**5.0**	**4.1**	**81.0%**
1.2.a	Workforce Planning		2.0	1.5	75.0%
1.2.b	Staffing/Recruiting/Supplemental Workforce		3.0	2.6	85.0%
1.3	**Compensation**	**(Weight = 11%)**	**5.5**	**4.2**	**75.9%**
1.3.a	Cost Competitive Compensation		3.0	2.6	85.0%
1.3.b	Effectiveness of Implementation of Market-Based Pay Policy		2.5	1.6	65.0%
PERFORMANCE OBJECTIVE #2	**Work Force Excellence**	**(Weight = 16%)**	**8.0**	**6.6**	**83.0%**
2.1	**Performance Management**	**(Weight = 8%)**	**4.0**	**3.1**	**78.0%**
2.1.a	Implementation of Performance Management System		4.0	3.1	78.0%
2.2	**Effectiveness of Employee/Labor Relations**	**(Weight = 8%)**	**4.0**	**3.5**	**88.0%**
2.2.a	Employee and Labor Relations		4.0	3.5	88.0%
PERFORMANCE OBJECTIVE #3	**Equal Opportunity**	**(Weight = 24%)**	**12.0**	**7.8**	**65.0%**

Appendix C - Operations and Administration System Scores

3.1 Employment of Women and Minorities (Weight = 24%)	**12.0**	**7.8**	**65.0%**
3.1.a Employment of Minorities and Women	12.0	7.8	65.0%
PERFORMANCE OBJECTIVE #4 Customer Needs (Weight = 14%)	**7.0**	**5.0**	**72.0%**
4.1 Customer Needs Analysis (Weight = 14%)	**7.0**	**5.0**	**72.0%**
4.1.a Customer Needs Input Survey	7.0	5.0	72.0%
PERFORMANCE OBJECTIVE #5 HR Leadership in Deploying Mission/Business Strategy			
(Weight = 14%)	**7.0**	**5.3**	**75.0%**
5.1 Alignment of HR Programs (Weight = 14%)	**7.0**	**5.3**	**75.0%**
5.1.a Deployment of Strategy	7.0	5.3	75.0%

Appendix C - Operations and Administration System Scores

PERFORMANCE OBJECTIVE	WEIGHT	SCORE	PERCENT
INFORMATION MANAGEMENT	**50.0**	**45.4**	**90.7%**
PERFORMANCE OBJECTIVE #1 Information Management Program (Weight = 100%)	**50.0**	**45.4**	**90.7%**
1.1 Operational Effectiveness (Weight = 30%)	**15.0**	**14.0**	**93.0%**
1.1.a Operational Effectiveness	15.0	14.0	93.0%
1.2 Customer Focus (Weight = 30%)	**15.0**	**13.5**	**90.0%**
1.2.a Level of Customer Satisfaction	15.0	13.5	90.0%
1.3 Effective IM Mgmt. Systems, Operational Practices (Weight = 20%)			
and Internal Controls	**10.0**	**8.8**	**88.0%**
1.3.a IM Self-Assessment and Corrective Action Program	10.0	8.8	88.0%
1.4 Strategic and Tactical Planning (Weight = 20%)	**10.0**	**9.1**	**91.0%**
1.4.a Planning Initiative	10.0	9.1	91.0%

Appendix C - Operations and Administration System Scores

PERFORMANCE OBJECTIVE			WEIGHT	SCORE	PERCENT
PROCUREMENT			**50.0**	**46.0**	**92.0%**
PERFORMANCE OBJECTIVE #1	**Mgmt. of Internal Business Processes**	**(Weight = 70%)**	**35.0**	**31.9**	**91.1%**
1.1 System Evaluation		**(Weight = 30%)**	**15.0**	**14.3**	**95.0%**
1.1.a Assessing System Operations			15.0	14.3	95.0%
1.2 Pursuing Best Practices		**(Weight = 20%)**	**10.0**	**9.5**	**95.0%**
1.2.a Measuring Efficiency			10.0	9.5	95.0%
1.3 Supplier Performance		**(Weight = 15%)**	**7.5**	**6.2**	**82.0%**
1.3.a Measuring Supplier Performance			7.5	6.2	82.0%
1.4 Socioeconomic Subcontracting		**(Weight - 5%)**	**2.5**	**2.0**	**80.0%**
1.4.a Meeting Socioeconomic Commitments			2.5	2.0	80.0%
PERFORMANCE OBJECTIVE #2	**Customer Satisfaction**	**(Weight = 10%)**	**5.0**	**4.7**	**93.0%**
2.1 Customer Feedback		**(Weight = 10%)**	**5.0**	**4.7**	**93.0%**
2.1.a Customer Satisfaction Index			5.0	4.7	93.0%
PERFORMANCE OBJECTIVE #3	**Learning and Growth**	**(Weight = 10%)**	**5.00**	**4.7**	**93.5%**
3.1 Employee Feedback		**(Weight = 5%)**	**2.5**	**2.3**	**92.0%**

Appendix C - Operations and Administration System Scores

3.1.a	Employee Satisfaction Index	2.5	2.3	92.0%
3.2	**Information Availability (Weight = 5%)**	**2.5**	**2.4**	**95.0%**
3.2.a	Measuring Availability of Information	2.5	2.4	95.0%
PERFORMANCE OBJECTIVE #4	**Managing Financial Aspects (Weight = 10%)**	**5.0**	**4.8**	**95.0%**
4.1	**Process Cost (Weight = 10%)**	**5.0**	**4.8**	**95.0%**
4.1.a	Cost to Spend Ratio	5.0	4.8	95.0%

PERFORMANCE OBJECTIVE			WEIGHT	SCORE	PERCENT
PROPERTY MANAGEMENT			**50.0**	**41.0**	**82.0%**
		Points		**455.0**	
PERFORMANCE OBJECTIVE #1	**Accountability for Equipment and Sensitive Property, and Precious Metals**	**(Weight = 60%)**	**30.0**	**280.0**	
1.1	**Accountability for Equipment, Sensitive Property and Precious Metals**	**(Weight = 45%)**	**22.5**	**215.0**	
1.1.a	Property and Precious Metals Accounted For		22.5	215.0	
1.2	**Identification of Items Subject to Inventory**	**(Weight = 15%)**	**7.5**	**65.0**	
1.2.a	Accuracy of Identification		7.5	65.0	
PERFORMANCE OBJECTIVE #2	**Stewardship Over Personal Property**	**(Weight = 20%)**	**10.0**	**83.0**	
2.1	**Org.Stewardship and Individual Custodianship**	**(Weight =20%)**	**10.0**	**83.0**	
2.1.a	Timeliness of Assignment		10.0	83.0	
PERFORMANCE OBJECTIVE #3	**Vehicle Utilization**	**(Weight = 5%)**	**2.5**	**25.0**	
3.1	**Fleet Management**	**(Weight = 5%)**	**2.5**	**25.0**	
3.1.a	Vehicle Utilization		2.5	25.0	
PERFORMANCE OBJECTIVE #4	**Information to Improve/Maintain Processes**	**(Weight = 10%)**	**5.0**	**42.0**	
4.1	**Self-Assessment of Policies and Procedures**	**(Weight = 10%)**	**5.0**	**42.0**	

4.1.a Assessing Support Processes	5.0	42.0	
PERFORMANCE OBJECTIVE #5 Customer Alignment (Weight = 5%)	**2.5**	**25.0**	
5.1 Monitoring Customer Alignment (Weight = 5%)	**2.5**	**25.0**	
5.1.a Aligning Customer Expectations	2.5	25.0	

Computation of Salary Increase Authorization Multiplier

Appendix F Element of Laboratory Performance

Performance Area	Rating	%	x	Pts	=	Score
Science & Technology	Outstanding	93.4%	x	500	=	467
Administrative Systems						
Laboratory Management	Outstanding	94.3%	x	50	=	47.2
Environment Restoration and Waste Management	Outstanding	91.8%	x	40	=	36.7
Environment Safety and Health	Excellent	88.3%	x	110	=	97.1
Facilities Management	Outstanding	92.3%	x	50	=	46.1
Financial Management	Outstanding	90.3%	x	50	=	45.1
Human Resources	Good	75.3%	x	50	=	37.6
Information Management	Outstanding	90.7%	x	50	=	45.4
Procurement	Outstanding	92.0%	x	50	=	46.0
Property Management	Excellent	82.0%	x	50	=	41.0
Total Administrative Systems						442
Total of Science and Technology and Administrative Systems						909

Salary Increase Authorization Multiplier (from Appendix F)

FY 99 Salary Increase Fund for UC Laboratories

Executive Merit Pool (Based on S&E)	6.10%					
Executive Merit Pool (Appendix A & F)		6.10%	x	1.50	=	9.15%